

# CHESTERFIELD COUNTY

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[www.co.chesterfield.va.us/ManagementServices/Purchasing/purchase.asp](http://www.co.chesterfield.va.us/ManagementServices/Purchasing/purchase.asp)

*Our vision is to be recognized by our customers and professional peers as an innovative provider of excellence in customer service and as a leader in the purchasing profession.*

*Our mission is to support our customers in performing their mission by providing quality purchasing services.*



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SPECIFICATIONS AND INVITATION FOR BIDS

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**Purchasing Department  
9901 Lori Road  
P. O. Box 51  
Chesterfield, VA 23832-0051  
Telephone No. (804) 748-1617**

**CHESTERFIELD COUNTY PURCHASING DEPARTMENT  
GENERAL TERMS, CONDITIONS, AND INSTRUCTIONS  
IMPORTANT - READ CAREFULLY BEFORE SUBMITTING BID**

**1. SUBMISSION AND RECEIPT OF BIDS:**

- a. Sealed bids shall be received until, but no later than the specified time and date of opening as designated in the invitation. Late bids shall be rejected. **Bids, to include addenda or changes to a response, shall not be accepted via a FAX machine or by Internet E-mail.**
- b. In the event that Chesterfield County is closed due to inclement weather and/or emergency situations prior to or at the time set aside for the published bid opening, the bid opening date will default to the next open business day at the same time.
- c. All bids shall be signed on the Terms and Signature Sheet in order to be considered. Bids submitted without a signature shall be rejected. If the Bidder is a partnership or corporation, the Bidder shall show the title of the individual signing the bid, and if the individual is not an officer of the partnership or corporation, if requested, the Bidder shall submit proof that the individual has the authority to bind the partnership or corporation.
- d. **Only when specifically requested in the white pages of the Bid Documents,** shall each bid be accompanied by a bid bond with surety satisfactory to the County Attorney or a Cashier's or a Certified Check, made payable to the Treasurer, Chesterfield County, in an amount equal to five percent of the total bid price. In the event of default by the Bidder, the five percent deposit shall be and represent liquidated damages to the County. Bids received without a bid bond, when specifically requested, shall be rejected.
- e. Bids concerning separate bid invitations are not to be combined on the same form or placed in the same envelope. Bids submitted in violation of this provision may not be considered.
- f. Unless otherwise specified, Bidders are to use the bid form furnished by the County.
- g. No bid shall be altered or amended after the specified time for opening.

**2. AMENDING BIDS:** Amending or withdrawing bids by a potential bidder prior to bid opening: A potential bidder may amend and/or withdraw a bid before the due date and time set for receipt of bids. All requests from a potential bidder to return their bid shall be in writing, addressed to the Purchasing Department, and signed by a person authorized to represent the person or firm that submitted the bid. The potential bidder may be contacted by telephone to verify the authorization of the return request and the signature involved if there is doubt as to the documents authenticity. **All amendments/alterations to the bid are to be initialed by an individual authorized to represent the person or firm that submitted the bid.**

**3. WITHDRAWAL OF BIDS:**

**Withdrawal: Construction** (*Code of Virginia 2.2-4330*)

- a. A bidder for a public construction contract, other than a contract for construction or maintenance of public highways, may withdraw of his bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or unintentional omission of a quantity of work, labor, or material made directly in the compilation of a bid which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn. If a bid contains both clerical and judgment mistakes, a bidder may withdraw his bid from consideration if the price bid would have been substantially lower than the other bids due solely to the clerical mistake, that was an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of a bid which shall be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn.

**No bid may be withdrawn after the scheduled closing time for receipt of bids for sixty (60) calendar days, except as provided in Section 2.2-4330(A)(i), *Code of Virginia*, which states the bidder shall give notice in writing of his claim of right to withdraw his bid within two business days after the conclusion of the bid opening procedure. Any withdrawal request made to the Director of Purchasing must be accompanied by bidder's original work papers, or such request will be rejected.**

In order for work papers, documents and materials submitted pursuant to this section to be deemed a trade secret or proprietary information pursuant to *Code of Virginia*, subdivision F of 2.2-4342, a bidder must expressly invoke the aforementioned statute in the notice of withdrawal and specifically state the reasons why protection under 2.2-4342-F is necessary.

**Withdrawal: (other than construction)**

- b. A bidder for a public contract may request withdrawal of his bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or unintentional omission of a quantity of work, labor, or material made directly in the compilation of the bid which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn. If a bid contains both clerical and judgment mistakes, a bidder may request withdrawal of his bid from consideration if the price bid would have been substantially lower than the other bids due solely to the clerical mistake, that was an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of a bid which shall be clearly shown by objective evidence drawn from inspection of original work papers documents and materials used in the preparation of the bid sought to be withdrawn. In order for work papers, documents and materials submitted with the notice of withdrawal to be deemed a trade secret or proprietary information pursuant to *Code of Virginia*, subdivision F of 2.2-4342, a bidder must expressly invoke the aforementioned statute in the notice of withdrawal and specifically state the reasons why protection under 2.2-4342-F is necessary.

**4. DENIAL OF WITHDRAWAL OF BID: (*Code of Virginia* 2.2-4330)**

If the County denies the withdrawal of a bid, it shall notify the bidder in writing stating the reasons for its decision and award the contract to such bidder at the bid price, provided such bidder is a responsible and responsive bidder.

**5. MISTAKES IN BIDS**

- a. Mistakes discovered following bid opening but prior to award: If there is a significant and obvious disparity between the prices of the lowest apparent responsive bidder and other bidders, the low bidder may be contacted by the purchasing authority to confirm the bid price. This does not relieve a bidder from the responsibility for the submission of a correct bid. If the bidder then alleges a mistake in the bid and can provide clear and convincing evidence that supports the existence of a clerical error to the satisfaction of the purchasing authority, the bid may be withdrawn only after approval by the County.
- b. Mistakes discovered after award: Bids containing mistakes by bidders shall not be withdrawn after award of a contract or issuance of a purchase order.

**6. PRICING:**

- a. Bidder warrants by virtue of bidding that prices, terms and conditions quoted in his bid will be firm for acceptance for a period of sixty (60) days from the date of bid opening unless otherwise stated by the County or Bidder.
- b. Prices should be stated in units of quantity as specified in the bid form. In case of error in extension of prices in the bid, the unit price shall govern.
- c. When a bid is for goods and/or services to be delivered on a one time only or staggered basis, only firm pricing shall be given consideration. General terms such as "price in effect at time of delivery" shall not be considered for award.

7. **PERFORMANCE AND PAYMENT BOND:** When requested in the bid, the County shall require the successful bidder to furnish a performance bond and labor and material payment bond with surety satisfactory to the County Attorney in the amount of the contract price at the time of or prior to execution of the contract. If bonds are requested in the bid, the successful Bidder shall pay the cost thereof; if not specified, the successful Bidder, when requested to do so, shall secure the bonds and the County shall pay the cost thereof.
8. **DELIVERY POINT AND TERMS:** All items shall be delivered F.O.B. destination, and freight, delivery costs, and incidental charges shall be included in the bid price(s). Failure to do so may be cause for not making award to a Bidder. The Bidder shall assume all liability and responsibility for the delivery of merchandise in good condition to the specified delivery location(s).
9. **CASH DISCOUNTS:** Cash discounts will be considered in determining the award. If a discount is offered, it is required that a minimum of fifteen (15) days be allowed for payment in order for the discount to be considered a factor in the evaluation of the bid.
10. **USE OF BRAND NAMES/SUBSTITUTIONS:** Unless otherwise specified in the invitation to bid, the name of a certain brand, make or manufacturer does not restrict bidders to the specific brand, make or manufacturer named; it conveys the general style, type, character, and quality desired, and any product which the County in its sole discretion determines to be the equal of that specified, considering quality, workmanship, economy of operation, and suitability for the purpose intended, shall be accepted.

In requesting a proposed substitution, the bidder shall submit with the bid form the name of the manufacturer, model number, and complete specifications on the proposed substitution for evaluation by the County. The bidder shall submit, with the bid form, a detailed list of any deviations from these specifications, written or implied. The bidder assumes responsibility for all changes in the work required as a result of the proposed substitution, including any change not listed in the request, but determined by the County to be necessary at a later point of progress in the work.

It shall be understood that the burden of proof for an "equal" product shall be and remain the sole responsibility of the bidder. The County's failure to object to a manufacturer shall not constitute a waiver of any of the requirements of the contract documents, and all products furnished by the listed manufacturer must conform to such requirements. The County's decision of approval or disapproval of a proposed substitution shall be final.

11. **QUALITY:** All materials used for the manufacture or construction of any supplies, materials, or equipment covered by this bid shall be new. Unless otherwise specified in bid, products bid must be new, the latest model, the best quality, and the highest grade workmanship.
12. **ACCEPTANCE OF MATERIAL:** The goods and/or services delivered as a result of this bid shall remain the property of the seller until a physical inspection is made, and thereafter accepted to the satisfaction of the County. In the event the goods and/or services supplied to the County are found to be defective or do not conform to specifications, the County reserves the right to cancel the order upon notice (verbal or in writing) to the seller and return goods to seller at the seller's expense.
13. **DELIVERY:** In the appropriate space, the bidder shall state the time of proposed delivery or project completion in number of calendar days. Unless otherwise specified, quote the earliest delivery possible, as this may be considered a factor in making award. Delivery expressed in calendar days may be given preference over such general terms as "stock", "immediately", and "as soon as possible". As time will be of the essence for any orders placed as a result of this bid, the County reserves the right to cancel such orders, or any part thereof, without obligation, if delivery is not made at the time(s) specified on bid form.
14. **COPYRIGHTS OR PATENT RIGHTS:** The bidder certifies by submission of bid that there has been no violation of copyrights or patent rights in manufacturing, producing, or selling the product or services shipped or ordered as a result of this bid. The successful bidder shall, at his own expense, defend any and all actions or suits charging such infringement, and will save Chesterfield County, its officers, employees, and agents harmless from any and all liability, loss, or expense incurred by any such violation.
15. **SAMPLES:** Evidence in the form of samples may be requested if brand being quoted upon is other than as specified. The County reserves the right to request that such samples be furnished at the time of bid opening. The County also reserves the right to request samples after the date of bid opening. Requested samples shall be

furnished free of expense to the County and if not used in testing or destroyed, will, upon request at the time of submission of sample, be returned at the bidder's expense.

16. **TAXES:** Chesterfield County is exempt from payment of Federal Excise Tax and State and Local Sales and Use Tax on all tangible personal property purchased or leased by Chesterfield County for its use or consumption. Tax exemption certification will be furnished upon request. Sales tax, however, is paid by Chesterfield County on materials and supplies that are installed by a contractor and become a part of real property. Contractors are not exempt from paying taxes on these categories, as they are considered to be a cost of doing business and should be considered in pricing when preparing a bid.
17. **LICENSES, PERMITS, AND FEES:** All bids submitted shall have included in price the cost of any business and professional licenses, permits, or fees required by Chesterfield County or the Commonwealth of Virginia.
18. **SIGNED BID CONSIDERED AN OFFER:** This signed bid shall be considered an offer on the part of the bidder and shall be deemed accepted upon approval by Chesterfield County. In case of default by the successful bidder, or failure to deliver the goods and/or services ordered by the time specified, the County may terminate the purchase order and/or contract, and after due notice (verbal or in writing) may procure them from other sources and hold the defaulting bidder liable for any resulting additional cost.
19. **QUALITY EXPECTATION STATEMENT:** Chesterfield County, through its "Total Quality Improvement" initiative, is a recognized leader in providing quality products and services at the most effective cost possible. Therefore, the County fully expects, requires, and shall hold all Contractors, and all agents, staff, representatives, and subcontractors of the Contractor, responsible for, and accountable to, the highest quality standards of professional workmanship, products and services. In the spirit of the County's total quality improvement initiative, the Contractor shall be expected to become a member of the team and perform or provide all work, services and products with a target of "zero defects - zero rework".
20. **AWARD PHILOSOPHY:** Award will be made by the County to the lowest responsible bidder with the lowest responsive bid which is in substantial conformance with the terms, conditions, and specifications of the bid and is in conformance with the *Code of Chesterfield County* and the *Code of Virginia*.

Chesterfield County reserves the right to accept or reject any or all bids or parts of bids, to waive informalities, and to request rebids. The County also reserves the right to award the bid in a manner which the County deems will best serve its interest. Bids making exceptions to the terms and conditions included in this invitation may be considered, but preference may be given to bids with no exceptions taken. It further reserves the right to award the bid on a split order basis, lump sum, or individual item basis, or such combination as shall best serve the interest of the County, unless otherwise specified. The County may award a bid to a single contractor or to multiple contractors. It also reserves the right to increase or decrease quantities at the unit price bid.

21. **FACTORS OTHER THAN PRICE IN AWARD DECISION:** The following factors in addition to price (as they apply) shall be a consideration in the award decision:
  - a. The ability to provide references which may substantiate past work performance and experience in the type of work required for the contract. The lowest responsive bidder(s) may be required to furnish a contractor qualifications statement, to include references, prior to any such award. The County may contact all references furnished by bidders. The right is further reserved by the County to contact references other than, and/or in addition to, those furnished by the bidder. If, in the sole opinion of the County, a bidder is determined to be non responsible as a result of any investigation conducted by or for the County, award will not be made to that bidder.
  - b. The quality of performance/workmanship of previous contracts for goods and/or services delivered to or performed for the County.
  - c. The timely completion of previous contracts for services or the timely delivery of past orders for goods.
  - d. The sufficiency of financial resources and its impact on ability of the bidder to perform the contract or provide the services.

- e. The County reserves the right, at its option, to conduct on-site inspections of any bidder's facilities prior to award. The results of any such inspection will be considered by the County in determining bidder's capabilities of successfully administering the contract.
  - f. The ability and availability of the bidder to provide both quality and timely maintenance, service, and/or parts.
  - g. The resale value, life cycle costing and value analysis of a product.
  - h. The availability and capability of local and regional vendor support as it affects the quantity, quality, and timeliness of the goods and/or services.
  - i. Timely delivery of goods or timely completion of services as stated by bidder.
  - j. Substantial compliance or noncompliance with specifications set forth in bid as determined by the County.
  - k. Inventory capability as it relates to a particular bid.
  - l. Results of product testing.
22. **STATE REGISTRATION OF CONTRACTORS (IF APPLICABLE):** Attention is directed to Chapter 11, Title 54.1 of the *Code of Virginia* (Re: State registration of contractors when applicable), which requires that all bidders shall show evidence of the proper license under the provision of this chapter before such bid is considered.
23. **INTERPRETATION OF BID:** If any party contemplating the submission of a bid on this invitation is in doubt as to the true meaning of any part of the bid, the Purchasing Department should be contacted. Any change to the Invitation to Bid will be made only by written addendum mailed to prospective bidders at the addresses furnished for such purposes. The County will not be responsible for any changes except as noted through a written addendum.
24. **PROPRIETARY INFORMATION:** Section 2.2-4342-E of the *Code of Virginia* states: Trade secrets or proprietary information submitted by a bidder, offeror, or contractor in connection with a procurement transaction or prequalification application submitted pursuant to subsection B of 2.2-4317 shall not be subject to the Virginia Freedom of Information Act (2.2-3700 et seq.); however, the bidder, offeror, or contractor shall (i) invoke the protections of this section prior to or upon submission of the data or other materials, (ii) identify the data or other materials to be protected, and (iii) state the reasons why protection is necessary.
25. **GOVERNING LAW:** Any contract resulting from this Invitation to Bid shall be governed by the provisions hereof and by the laws of the Commonwealth of Virginia. Any dispute arising out of this Contract shall be resolved in the Courts of the Commonwealth of Virginia, in and for Chesterfield County.
26. **TIE BIDS:** In the case of a tie bid, the County may give preference to goods, services, and construction produced in the County or provided by persons, firms or corporations having principal places of business in the County. If such choice is not available, preference shall then be given to goods and services produced in the Commonwealth pursuant to Section 2.2-4324 of the Code of Virginia. If no County or Commonwealth choice is available, the tie shall be decided by lot.
27. **NONASSIGNMENT:** Parties to any resulting contract shall not assign the contract without written consent of the other(s). If any party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the contract.
28. **AUDIT OF VENDOR RECORDS:** The County reserves the right to audit all vendor records in contracts where payments are based on contractor's records of time, salaries, materials, or actual expense.
29. **NEGOTIATION:** If the bid from the lowest responsible bidder exceeds available funds, the County may negotiate with the low bidder to obtain a contract price within available funds.

30. **SECTION 2.2-4311 CODE OF VIRGINIA:** Every contract for goods or services over \$10,000 shall include the following provisions:
1. During the performance of this contract, the Contractor agrees as follows:
    - a. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
    - b. The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such Contractor is an equal opportunity employer.
    - c. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.
  2. The Contractor shall include the provisions of the foregoing paragraphs a, b, and c in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.
31. **APPROPRIATION OF FUNDS:** The continuation of the terms, conditions, and provisions of any resulting contract beyond June 30 of any year, the end of the County's fiscal year, are subject to approval and ratification by the Chesterfield County Board of Supervisors and appropriation by them of the necessary money to fund said contract for each succeeding year.
32. **SCHOOL BOARD:** When goods and/or services are for the benefit of Chesterfield County Schools, the contract shall be entered into on behalf of the Chesterfield County School Board.
33. **REQUIREMENTS CONTRACTS:**
- a. Whenever a bid is sought seeking a source of supply for a requirements contract for goods and/or services, the quantities or usage shown are estimates only. No guarantee or warranty is given or implied by Chesterfield County as to any minimum or total amount that may or may not be purchased from any resulting contracts.
  - b. The County reserves the right, at its sole option, to renew the contract for consecutive terms.
  - c. The County reserves the right to award bids for requirements contracts based on the pricing of the initial term of the contract or any combination of initial and renewal terms.
  - d. The County may award a bid to a single contractor or to multiple contractors.
  - e. The County reserves the right not to renew the contract at the end of the initial term or any subsequent term.
  - f. The County reserves the right to terminate the contract upon written notice to the contractor(s).
  - g. In the event that a requirements contract is awarded for goods and/or services, the County reserves the right to bid individual bulk purchases if the County deems it will best serve their interest.
  - h. It is understood and agreed to between the parties in a resulting contract that Chesterfield County shall not be obligated to purchase or pay for materials under such contract unless and until they are ordered and delivered.
  - i. Bids based on a firm price or those including a "downward escalator" clause for a requirements contract term may be given preference over lower ones bearing an "escalator" clause.
  - j. The County has the right to extend this contract up to and not to exceed one hundred twenty (120) days following the last term of renewal.

#### 34. DRUG FREE WORKPLACE

During the performance of this contract, the contractor agrees to:

- a. Provide a drug-free workplace for the contractor's employees
- b. Post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition
- c. State in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace
- d. Include the provisions of the foregoing clauses in every subcontract or purchase order over \$10,000, so that the provisions will be binding upon each subcontractor or vendor

For the purposes of this section, "drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a contractor in accordance with this chapter, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

35. **ENVIRONMENTAL MANAGEMENT:** Vendor/Supplier/Contractor shall be responsible for complying with all federal, state, and local environmental regulations relating to transportation, handling, storage, spillage and any other aspect of providing the services specified herein, as applicable.
36. **SECTION 2.2-4343.1 CODE OF VIRGINIA:** Chesterfield County does not discriminate against faith-based organizations.



CHESTERFIELD COUNTY PURCHASING DEPARTMENT  
CHESTERFIELD, VIRGINIA 23832-0051  
(804) 748-1617

Bid Prepared By:

**Cathy M. Lantz, CPPB  
Purchasing Officer**

Invitation To Bid Number:

**03-3237-8867**

June 30, 2003

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Sealed bids, subject to the specifications and conditions contained herein and attached hereto, will be received in the Purchasing Department, Chesterfield Administration Building, Room 402, until, but no later than **3:00 p.m.** Local Time Prevailing **July 23, 2003**, and then publicly opened and read aloud for a **Requirements Contract for Medium Duty Type I Ambulance for the Chesterfield County Fire and EMS Department**. This invitation is a **cooperative bid** for Chesterfield County, Henrico County and the Metropolitan Airport Authority.

If you are an individual with a disability and require a reasonable accommodation, please notify the Purchasing Department (804) 748-1617, three working days prior to need.

To be considered, your bid must be submitted on a copy of this Invitation to Bid. Bidders shall sign this form in the space provided on the Terms and Signature Sheet and return bid document to: Chesterfield County Purchasing Department, Administration Building - Room 402 - Fourth Floor, 9901 Lori Road, P.O. Box 51, Chesterfield, VA 23832-0051. **Mark outside of your envelope with Invitation for Bid #03-3237-8867 and opening date of bid.**

**Bids, to include addenda or changes to a response, shall not be accepted via Fax machine or by Internet E-mail.**

Time is of the essence and any bid received after the announced time and date for submittal, whether by mail or otherwise, will be rejected. The time of receipt shall be determined by the time clock stamp in the Purchasing Department. Bidders are responsible for ensuring that their bids are stamped by Purchasing Department personnel before the deadline indicated. **Late bids received will be so noted in the bid file in order that the vendor's name will not be removed from the subject commodity/service list.**

Nothing herein is intended to exclude any responsible vendor, his product or service or in any way restrain or restrict competition. On the contrary, all responsible vendors are encouraged to bid and their bids are solicited.

For information pertaining to the award on this procurement transaction, bidders and/or offerors may access public notification electronically at  
[www.co.chesterfield.va.us/ManagementServices/Purchasing/purchase.asp](http://www.co.chesterfield.va.us/ManagementServices/Purchasing/purchase.asp).

## **COMMITMENT TO DIVERSITY AND CHESTERFIELD BUSINESSES**

Chesterfield County is a rapidly growing progressive community consisting of an increasingly diverse population. This diversity provides for a dynamic and robust community that promotes growth. Chesterfield County believes that all of its citizens should benefit from this economic growth without regard to race, color, religion or economic status.

The county is committed to increasing the opportunities for participation of minority business enterprises, woman-owned businesses and businesses located in Chesterfield County to ensure diversity in its procurement and contract activities. These businesses are encouraged to respond to all Invitations for Bids and Requests for Proposals. In addition, the county strongly encourages each contractor and/or supplier with which the county contracts to actively solicit minority business enterprises, woman-owned businesses and businesses located in the county as subcontractors/suppliers for their projects.

Upon award/renewal of the contract, the successful bidder/offeror shall furnish data requested on the Certification of Subcontractor/Supplier Activity form included in this IFB/RFP document. This information will enable the county to document the dollar level of activity and measure the success of its purchasing and contracting efforts in this endeavor.

### **DEFINITIONS:**

For purposes of Chesterfield County's classification and reporting program, in cooperation with the Virginia Department of Minority Business Enterprise, the following definitions apply:

Woman-Owned Business (WOB) - a business concern that is majority owned by a woman who also controls and operates the business. In this context, "control" means exercising the power to make policy decisions, and "operate" means being actively involved in the day-to-day management.

Minority Business Enterprise (MBE) - a business enterprise that is owned and controlled by one or more socially and economically disadvantaged persons. Such disadvantage may arise from cultural, racial, chronic economic circumstances or background or other similar cause. Such persons include, but are not limited to: African Americans, Asian Americans, Native Americans, Eskimos and Aleuts. (Reference: 2.1-6432.1 of the *Code of Virginia*)

Chesterfield Business (CB) - any private business enterprise, located within the jurisdictional boundaries of Chesterfield County.

Minority - a person who is a citizen of the United States or a legal resident alien and who satisfies one or more of the following:

Asian Americans - all person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent or the Pacific Islands including but not limited to Japan, China, Vietnam, Korea, Samoa, Laos, Cambodia, Taiwan, northern Marinas, the Philippines, U. S. territory of the Pacific, India, Pakistan, Bangladesh and Srilanka and who are regarded as such by the community of which these persons claim to be a part.

African Americans - all persons having origins in any of the original peoples of Africa and who are regarded as such by the community of which these persons claim to be a part.

Hispanic Americans - all persons having origins in any of the Spanish-speaking peoples of Mexico, South or Central American, or the Caribbean Islands or other Spanish or Portuguese cultures and who are regarded as such by the community of which these persons claim to be a part.

Native Americans - all persons having origins in any of the original peoples of North America and who are regarded as such by the community of which these persons claim to be a part or who are recognized by a tribal organization.

Eskimos and Aleuts - all persons having origins in any part of Northern Canada, Greenland, Alaska, and Eastern Siberia and who are regarded as such in the community of which these persons claim to be a part.

Members of other groups - all other individuals found to be socially and economically disadvantaged by the United States Small Business Administration under Section 8(a) of the Small Business Act (15USC637)[a]. (VR486-01-02; September 9, 1992).

CERTIFICATION OF SUBCONTRACTOR/SUPPLIER ACTIVITY  
MINORITY BUSINESS ENTERPRISES, WOMAN-OWNED BUSINESSES  
AND CHESTERFIELD BUSINESSES

Project/Contract Name/Number:

Contractors shall furnish the information requested below regarding subcontractor(s) or supplier(s).

**(This form will be sent by the Purchasing Department to the contractor for completion at the time of award/renewal, as appropriate.)**

Name and Address of Subcontractor/Supplier	(T) MBE	(T) WOB	(T) CB	Commodity or Service	Dollar Amount

If a continuation of this list of subcontractors/suppliers is needed, please attach additional pages to this form.

I have no MBE, WOB or CB applicable to this contract \_\_\_\_\_(T )

Contractor hereby certifies that the above information is correct.

Complete Legal Name of Firm: \_\_\_\_\_ Date:\_\_\_\_\_

Form Prepared By:\_\_\_\_\_ (Type or Print)

## **SCOPE**

This Invitation for Bid covers the estimated yearly requirements for Medium Duty Type I Ambulance of Chesterfield County, Henrico County and the Metropolitan Washington Airports Authority. The purpose is to establish a requirements contract with firm pricing and delivery under which these agencies may place orders as needed. This invitation is a **cooperative bid** for Chesterfield County, Henrico County and the Metropolitan Washington Airports Authority. Any participating cooperative agencies shall have full utilization of the contract during any term of the resulting contract. Any named cooperative agency reserves the right to not participate in this requirements contract.

## **TERMS OF CONTRACT/RENEWAL**

The initial term of this contract shall be for a period from award of the contract through December 31, 2004.

The agencies reserve the right, at its sole option, to renew the contract for nine (9) additional consecutive terms. Prices for the subsequent terms shall be determined at the time of the bid opening through percentages over the previous term's pricing, and shown under the section herein listed as "Proposal". Pricing shall be firm for each contract term.

Each agency shall execute their own contract with the successful bidder in accordance with each agencies purchasing regulations, insurance requirements, policies and procedures.

The decision to award or reject bids, including any renewals, shall be made by each individual agency.

The subsequent contract shall be construed to be in accordance with and governed by the laws of the Commonwealth of Virginia and the Counties of Chesterfield and Henrico, and the Metropolitan Washington Airports Authority.

## **INQUIRIES/QUESTIONS**

Any questions concerning this bid shall be directed to Battalion Chief Scott Cooper at (804) 751-4725, Lt. Jay Flippin at (804) 717-6104 or Cathy M. Lantz, Purchasing Officer at (804) 748-1701.

## **BONDS**

A Labor and Material Payment Bond and a Performance Bond, each in the amount of 100% of the ambulance, **renewal for the life of the contract**, with a corporate surety authorized to do business in the State of Virginia and otherwise acceptable in all respects to the Owner's Attorney will be required for the faithful performance of the contract. The Bonds shall be furnished by the company who shall build the ambulance being proposed. A bond issued by a sales representative, or agent, of the manufacturer shall not be acceptable. Any exception to this requirement shall not be tolerated. Each agency that may establish a requirements contract for this ambulance shall be furnished bonds for surety.

## **WARRANTY BOND**

The bidder's bonded warranty shall extend to the chassis and body, regardless of the manufacturer.

Bids received from bidders who do not manufacture the chassis shall provide a warranty that shall be issued jointly and severally by, and signed by, both the bidder and the chassis manufacturer.

If the successful bidder does not manufacture the chassis, the bidder shall supply a separate warranty bond, in addition to their performance bond, along with their signed contract. This warranty bond shall guarantee all terms and conditions of the warranty and names both the bidder and chassis manufacturer as co-principals. This warranty bond shall be issued for the contract amount and shall remain in force for a term that is consistent with the term of the warranty stated in the bid.

### **DELIVERY ADDRESSES**

Chesterfield Fire & EMS Logistics  
9600 Lori Road  
Chesterfield, VA 23832

Henrico Fire  
7721 E. Parham Road  
Richmond, VA 23294

Metropolitan Washington Airports Authority  
Warehouse & Shops Building  
44701 Propeller Court  
Dulles, VA 20166

### **BASIS OF AWARD**

The agencies reserve the right to award to a single bidder. In making the award, consideration shall be given to the price, compliance with bid requirements, and any combination of factors deemed pertinent.

Additionally, the County reserves the right to award the bid by using the base unit price, with optional equipment not considered in the bid evaluation and award decision.

### **QUANTITIES**

Estimated quantity is one (1) ambulance for each agency per contract period. Quantities listed are estimates anticipated for the contract term. The agencies retain the option to increase or decrease based on actual requirements. The consortium does not guarantee the purchase of any specific minimum quantity during the term of this agreement.

### **PURCHASE ORDER**

The issuing of a purchase order, either verbal or written, shall be the responsibility of each individual agency in accordance with their regulations, policies and procedures.

### **CHANGE ORDER**

The participating agencies reserve the right to issue a change order to this contract in the case when modifications/changes may be made during the fabrication of an ambulance on order. Any changes shall be issued by the agency in written form to the successful bidder.

## **INVOICE**

Original invoice in duplicate for equipment ordered and delivered shall be submitted by the Contractor to: Chesterfield County Accounting Department, P. O. Box 40, Chesterfield, VA 23832. All invoices shall show the Purchase Order number, the name of the person placing the order, the item description, stock number, and contract price as applicable.

## **INSURANCE**

**The following limits and modifications are required by Chesterfield County. However, the successful bidder shall provide as necessary the cooperative agencies insurance requirements.**

**An original copy of a Certificate of Insurance shall be required and must be furnished by the successful contractor during execution of the contract. The Certificate of Insurance does not need to accompany the bid.**

The contractor shall purchase and maintain in force, at his own expense, such insurance as will protect him and the County from claims which may arise out of or result from the Contractor's execution of the work, whether such execution be by himself, his employees, agents, subcontractors, or by anyone for whose acts any of them may be liable. The insurance coverage shall be such as to fully protect the Owner, the Engineer (if applicable) and the general public from any and all claims for injury and damage resulting by any actions on the part of the contractor or his forces as enumerated above. The Contractor shall furnish a copy of an original Certificate of Insurance, **naming Chesterfield County as an additional insured.** Should any of the policies be canceled before the expiration date, the issuing company will mail 30 days written notice to the certificate holder. The Contractor shall furnish insurance in satisfactory limits, and on forms and of companies, which are acceptable to the Owner's Attorney and/or Risk Management and shall require and show evidence of insurance coverages on behalf of any subcontractors (if applicable), before entering into any agreement to sublet any part of the work to be done under this Contract.

The following insurance requirements are the minimum that will be acceptable:

1. Worker's Compensation Insurance with statutory limits and Employers' Liability Insurance of \$500,000 for one accident or aggregate disease.
2. Commercial General Liability - \$1,000,000 Each Occurrence Combined Single Limit – Including coverage for XC and U hazards
3. Comprehensive Automobile Liability - \$1,000,000 Each Occurrence Combined Single Limit
4. Umbrella Liability Insurance - \$2,000,000 Each Occurrence

All insurance policies under coverages 2, 3 and 4 above shall name the Owner, as additional insured.

The undersigned Contractor promises to hold harmless and indemnify Chesterfield County and their agents, officers, employees and representatives from any and all liability, claims, demands, judgments, damages, actions and causes of actions arising out of the delivery and pre-acceptance trials of the Fire Rescue Ambulance. The undersigned Contractor also agrees to waive all rights of subrogation against Chesterfield County Board of Supervisors and their agents, officers, employees and representatives.

The Contractor shall be responsible for maintaining current certificates of insurance on file with the Owner, and the Insurance Company shall be responsible for notifying the Owner thirty (30) days prior to the expiration, cancellation, non-renewal or material change in the coverage.

The Contractor shall be responsible for continuing in force completed operations, bodily injury and property damage coverage for a minimum of two (2) years after completion and acceptance of the work.

Coverage shall be provided by a carrier(s) rated "Excellent" by A. M. Best.

#### **INSTRUCTIONS REGARDING INSURANCE CERTIFICATES**

The Contractor and his insurance company should carefully review the insurance requirements applicable to this job. **All requirements herein must be met before the County will execute the contract.** In particular, we would call your attention to the following:

1. Please note that the Insurance Certificate must state that the Commercial General Liability and the Umbrella Liability Insurance Policies name **Chesterfield County as an additional insured**. This requirement may be met by placing the following language on the Certificate. Many Certificates have a space headed **"DESCRIPTION"** where the language may be inserted as follows:

**Chesterfield County is additionally insured or that Chesterfield County is additionally insured with respects to General Liability; and/or Umbrella Liability policies.**

2. The Insurance Certificate must also contain the required statement concerning notice of cancellation or other change in coverage. The statement used on some Certificate forms is not acceptable. The statement which is required by the contract documents reads as follows:

"Such certificate shall provide that in the event of the cancellation of the policy or policies listed on such certificate, not less than 30 days notice in writing shall be given to the County.

**NOTE: The cancellation clause in the Insurance Certificate shall be modified by striking the words 'endeavor to' in the second line and by striking the clause reading 'but failure to mail such notice shall impose no obligation or liability of any kind upon the company'."**

3. The Certificate Holder should be listed as: Chesterfield County  
c/o Purchasing Department  
P. O. Box 51  
Chesterfield, VA 23832-0051  
IFB/RFP No. \_\_\_\_\_
4. Certificate of Insurance must have an original signature.



## **SPECIAL CONDITIONS**

### **INTENT OF SPECIFICATIONS**

These specifications establish the minimum requirements for manufacturing and establish essential criteria for design, performance, equipment and appearance of the vehicles.

The vehicle described in these specifications shall be built in accordance with Federal Specifications for Ambulance KKK-A-1822C, latest edition. All components, unless otherwise required by these specifications, shall be the standard or optional equipment specifically advertised and installed by the manufacturer. Any equipment called for in these specifications which are not listed by the manufacturer as standard or optional shall meet the minimum requirements stated.

Vehicles must be industry standard Type I Class I Ambulance meeting all requirements of QVM.

The ambulance bid price shall include any and all freight charges and dealer preparation costs as applicable.

Bodies shall be built entirely in jigs and fixtures. Bodies built on the chassis are not acceptable.

The interior finish of the interior floor, walls, ceiling and cabinetry shall be decided at the Engineering Meeting.

Module described in bid shall be a new custom built unit. It shall not be a leftover, prototype, stock model modified or a demonstrator.

### **LIABILITY**

The successful bidder shall defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the ambulance or any appliance furnished under the contract.

### **BID SUBMITTAL REQUIREMENTS**

Bidders shall indicate in the "Yes" column (circle Y if complies or explain difference) if their bid complies for **each specification** (PARAGRAPH) specified. Exceptions shall be allowed if they are equal to or superior to that specified and provided they are listed and fully explained in the space provided.

Bidders shall submit their bid offer on the County bid document and shall return the bid in its entirety. However, if sufficient space is not provided for explanation, then attachment for this reason only may be acceptable.

### **EXCEPTIONS TO SPECIFICATIONS**

All exceptions shall be stated no matter how seemingly minor. Any exceptions not indicated by the bidder shall be assumed by the Owner to be included in the proposal, and regardless of the cost, the bidder shall be responsible for providing said exception.

The County in their sole opinion and discretion, shall determine if an exception to the specifications is an equal, or not an equal, by consideration of equivalent quality, workmanship, performance and dimensions.

### **GENERAL CONSTRUCTION**

The ambulance shall be designed with due consideration to distribution of load between the front and rear axles.

### **APPROVAL DRAWING**

A drawing of the proposed ambulance shall be provided for approval before construction begins. The sales representative shall also have a copy of the same drawing. The finalized and approved drawing shall become part of the contract documents. This drawing shall indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.

A "revised" approval drawing of the ambulance shall be prepared and submitted by the manufacturer to the purchaser showing any changes made to the approval drawing.

### **ENGINEERING MEETING**

An engineering meeting shall be held with the manufacturer's authorized representatives after award of the bid and prior to start of construction. The engineering meeting shall be held at the manufacturers facility. Chesterfield Fire & EMS will be responsible for any applicable expense for the department's representatives attending the meeting.

### **WARRANTY**

Body including all oxygen, mechanical, cabinetry, etc., (the entire body), including installation of same, shall be guaranteed for a period of two (2) years from date of acceptance, covering 100% parts and labor. The structural integrity of the body shall be guaranteed for the life of the unit, as long as the original purchaser shall own it.

The electrical systems shall be warranted for ten (10) years.

Should bidder offer a warranty different from above, explain in the space provided under the proposal section and attach a copy of express warranty.

In order to avoid warranty responsibility, manufacturers must build their own body. Body not built entirely by bidding manufacturer is not acceptable.

All other warranties, as outlined in these specifications shall be provided in writing as a part of the bid package.

### **PARTS AND SERVICE**

The bidder shall have a factory authorized service center and/or a mobile unit available within 100 miles of Chesterfield County. The service center shall have a factory trained service technician available to perform emergency repairs within 72 hours after notification by the County. The service center shall be capable of repairing the vehicle; including but not limited to: heating, ventilation of air conditioning, electrical repair, and body and accident repair.

The manufacturer shall have a parts network capable of shipping all non-custom parts within 24 hours of receipt of order. Non-custom parts shall consist of, but not limited to windshields, wiper motors, radiators, door handles and latches, interior trim pieces, etc.

### **DELIVERY**

To ensure proper break in of all components while still under warranty the ambulance **shall be delivered under its own power** – rail or truck freight shall not be acceptable. A qualified delivery engineer representing the contractor shall deliver the ambulance and remain for a sufficient length of time to instruct personnel in the proper operation, care and maintenance of the equipment delivered.

The successful bidder shall be required to deliver the completed vehicle to the Chesterfield Fire & EMS Logistics, 9600 Lori Lane, Chesterfield, Virginia.

### **INSPECTION AND ACCEPTANCE**

Final acceptance of the completed ambulance shall be after verification of compliance with these specifications and bid requirements, satisfactory completion of all performance test and delivery to Chesterfield County. The vehicle title will transfer to Chesterfield County only after final acceptance (see the sections pertaining to insurance for further details).

The completed vehicle shall comply with all applicable Federal and State of Virginia motor vehicle laws.

The vehicle shall meet all applicable Federal, State of Virginia and OSHA safety requirements.

Two (2) progress inspections shall be held at the manufacturers facility during construction of the ambulance. The first inspection will be held at or about the time of assembly or pre-paint. The second inspection will be of the completed ambulance prior to delivery. Chesterfield Fire & EMS will be responsible for any applicable expense for the department's representatives attending these inspections.

### **INFORMATION REQUIRED**

The manufacturer shall supply at time of delivery, complete operation and maintenance manuals covering the completed ambulance as delivered. A permanent plate shall be mounted in the driver's compartment that specifies the quantity and type of fluids required including engine oil, engine coolant, transmission and drive axle.

## **SPECIFICATIONS**

The following specifications are intended to define the level of quality and performance of the requested equipment and not to be restrictive. Equipment offered shall be equivalent dimensions, quality and performance. The specified equipment shall provide the following or equivalent features as noted.

### **MEDIUM DUTY TYPE I AMBULANCE SPECIFICATIONS**

<b><u>MEDIUM DUTY TYPE I AMBULANCE</u></b>	<b>Circle Y if same or explain the difference in the space provided.</b>
<b>VEHICLE DIMENSIONS:</b>	
Overall Vehicle Dimensions: Length: 296" Width: 99" Height: 108"	Y
Exterior Modular Body Dimensions: Length: 176" Width: 95" Height: 87"	Y
Interior Modular Body Dimensions: Length: 171" Width: 90 3/4" Height: 72"	Y
<b>INTERNATIONAL CHASSIS:</b>	
The chassis to be furnished for this ambulance body is to be an International 4300 SBA LP (4 x 2), or approved equal, per the detail specifications listed below. The chassis to have a 175" wheelbase with a 108" cab to axle dimension. The GVWR is to be 20,000 pounds with a top speed of approximately 75 MPH.	Y
<b>FRAME &amp; ACCESSORIES:</b>	
Frame rails to be high strength low alloy steel (80,000 PSI Yield); 9.125" x 0.362" x .0312"	Y
License plate holder	Y
Front chrome plated bumper (full width) aerodynamic, 0.142" material thickness	Y
Front tow hooks (2) frame mounted	Y
Drive shaft prop guard	Y
<b>FRONT AXLE, SUSPENSION &amp; TIRES/WHEELS:</b>	
Front axle to be I-beam type (Dana Spicer D800-F, or approved equal), 8,000 pound capacity	Y
Auxiliary front springs to be rubber	Y
Front spring suspension to be parabolic, taper leaf; 8,000 pound capacity	Y
Front shock absorbers required	Y
Front tires; 245/75R22.5 Unisteel G159 Goodyear, or approved equal; load range G, 14 ply	Y

Front wheels; disc type 22.5 polished aluminum, 10 stud, hub piloted, flanged nut, 7.50 DC rims with steel hubs	Y
Front wheel seals; Stemco Guardian, or approved equal oil lubricated wheel bearings	Y
Wheel bearing, front, lube EmGard, or approved equal, 50W synthetic oil	Y
Front wheel guards; Accuride for metric hub piloted wheels with flange mounted nuts mounted between the hub and wheel	Y
Chrome hub and nut covers	Y
<b>REAR AXLE, SUSPENSION &amp; TIRES/WHEELS:</b>	
Rear axle to be single reduction (Dana Spicer 17060S, or approved equal); 17,500 pound capacity with 190 wheel ends; gear ratio: 4.88; rear axle lube EmGard 75W-90 synthetic, or approved equal.	Y
Rear air suspension to be ROS (ride optimized suspension); 12,000 pound capacity; 5.3" ride height with shock absorbers	Y
Rear suspension air control pressure release control in cab	Y
Rear tires; 245/75R22.5 Unisteel G159 Goodyear, or approved equal; load range G, 14 ply	Y
Rear wheels; dual disc type 22.5 polished aluminum, 10 stud, hub piloted, flanged nut, 7.50 DC rims with steel hubs	Y
Rear wheel guards; Accuride for metric hub piloted wheels with flange mounted nuts mounted between the hub and wheel and between dual wheels	Y
Chrome hub and nut covers	Y
<b>BRAKE SYSTEM:</b>	
The air brake system to be a dual system for a straight truck application	Y
Drain valve (Berg) manual style with pull chain for air tank	Y
ABS system to be full vehicle wheel control type (4-channel)	Y
Air dryer to be Meritor-Wabco System Saver 1200, or approved equal.	Y
Front brakes to be air S-cam style; 12" x 4" including 20 square inch MGM, or approved equal, long stroke brake chambers	Y
Rear brakes to be air S-cam style; 16.5" x 7" including MGM TR3030, or approved equal, long stroke brake chambers and heavy duty spring activated parking brake with control on the cab dash	Y
Air compressor to be Bendix Tu-Flo #550, or approved equal; 13.2 CFM	Y
Air compressor supply line through air cleaner	Y
Brake chambers; spring (2) rear parking	Y
Brake lines; color coded nylon	Y
Dust shields; front & rear	Y
Slack adjusters; automatic; front & rear	Y

Parking brake valve; color coded yellow knob, located on instrument panel	Y
Gauge; air pressure; located in instrument cluster (air 1 and air 2 gauges)	Y
<b>STEERING SYSTEM:</b>	
Tilting steering column to be furnished	Y
Steering wheel (2-spoke); 18" diameter; black with leather wrap	Y
Steering gear to be TRW (Ross) TAS-40 (power), or approved equal	Y
<b>EXHAUST SYSTEM:</b>	
Single horizontal muffler and short tail pipe; aluminized steel; frame mounted exiting on the driver's side of the unit ahead of the rear axle	Y
<b>ELECTRICAL SYSTEM:</b>	
12 volt standard equipment	Y
Cigar lighter	Y
Ignition switch (keyless)	Y
Power Source cigar type receptacle without plug and cord	Y
Alternator to be Leece-Neville #4867JB, or approved equal (brush type); 12 volt 270 amp capacity with self excite, includes a 1-gauge charge circuit	Y
Body builder wiring: back of cab at frame, includes sealed connectors for tail/amber turn/marker/back-up/accessory power/ground and sealed connector for stop/turn	Y
Batteries (3) to be 12 volt maintenance free 1950 CCA total minimum	Y
Tail light wiring modified: includes separate wiring for standard left and right tail lights with 8' of extra cable; separate wiring for left and right body mounted tail lights with 8' of extra cable	Y
Jump start stud; remote mounted	Y
<b>RADIO:</b>	
Panasonic CQ-4400U, or approved equal (AM/FM with cassette player, weather band, clock with alarm, CD changer interface and controls; includes multiply coaxial speakers	Y
2-way radio wiring effects: 20 amp fuse protection; includes ignition wire with 5 amp fuse, wire ends heat shrink and 10' coil tapered to base harness	Y
<b>ENGINE, DIESEL:</b>	
International DT466, or approved equal; 230 horsepower @ 2300/2600 RPM; 620 lb-feet torque @ 1400, 2600 RPM governed speed, 237 peak HP (max); electro-hydraulic fuel system	Y
Borg-Warner Kysor fan driver (series 8000) with front tether air inlet and with nylon fan; use	Y
Radiator; CuBr 3-row cross flow; over under system, 506 square inch louvered with 270 square inch charge air cooler	Y

Indicator; low coolant level with audible alarm	Y
Anti-freeze; Texaco; long life coolant (-40 F)	Y
Air cleaner; single element	Y
Engine control; remote mounted with provisions for wiring for body builder installation of PTO controls, with ignition switch control	Y
Throttle, hand control; engine speed control; electronic, stationary, variable speed; mounted on steering wheel	Y
Water filter; heavy duty; extended life coolant filter can	Y
Starting motor; Leece-Neville M100R, or approved equal; 12 volt less thermal over-crank protection	Y
Gauge; air cleaner restriction; air cleaner mounted	Y
Cruise control; electronic; controls integral to steering wheel	Y
Engine shutdown; electric, key operated	Y
Governor; road speed, electronic	Y
Engine oil drain plug, magnetic	Y
Oil filter, engine; spin-on type	Y
Damper; crankshaft – viscous	Y
Fan optimized position	Y
Fuel filter; engine mounted	Y
<b>TRANSMISSION:</b>	
Allison automatic EVS-3000, or approved equal; close ratio, 5-speed with PTO gear and no retarder	Y
Transmission shift control (Allison) push-button; located on cab dash	Y
Transmission oil level sensor includes readout at shift selector	Y
Transmission oil to be Castrol TranSynd, or approved equal synthetic	Y
Allison WT spare input/output for this mission chassis	Y
<b>CAB OPTIONS:</b>	
Air Horn; single trumpet, Grover Emergency (black); air solenoid operated, mounted behind the bumper (right rail)	Y
Air Horn switch; passenger side (fire truck application; switch located on instrument panel close to passenger; driver to also activate switch at the steering wheel	Y
Switch, toggle; work light (lighted); on instrument panel	Y
Grille, chrome	Y
Front end tilting, fiberglass (3 piece construction)	Y

Keys (all alike) ID Z-001	Y
Windshield wipers; single motor, electric, cowl mounted	Y
Windshield wiper switch; 2 speed integral with turn signal switch with wash and intermittent feature	Y
<b>CAB ELECTRICAL:</b>	
Headlights; long life halogen; composite aero design for 2 light system; includes daytime running lights Clearance/marker lights; (5) Truck Lite, or approved equal; Amber LED lights, flush mounted on cab	Y
Fog lights; (2) clear, oval, with H355W halogen bulb	Y
Circuit breakers; manual reset SAE type III with trip indicators, replaces all fuses except for 5-amp fuses	Y
Wiring; chassis; color coded and continuously numbered	Y
<b>HEATER/AIR CONDITIONER:</b>	
Air conditioning; International Blend-Air; or approved equal with integral heater & defroster	Y
Refrigerant; hydro fluorocarbon HFC-134A	Y
Heater shutoff valves; (2) gate valve type	Y
Heater hoses; silicone	Y
Heater hose clamps; (Breeze) Belleville washer type smooth transition at the corner	Y
<b>FUEL TANK &amp; ACCESSORIES:</b>	
Fuel tank; top draw; D style, steel, 50 US gallons; (189 liter) 16" deep with quick connect outlet, mounted right side under cab	Y
Fuel/Water separator; Davco Fuel-Pro 210E, or approved equal with electric heat; thermostatic fuel temperature control; note: replaces primary fuel filter	Y
Fuel lines; nylon tubing with O-ring snap-on quick connect fittings on both ends	Y
<b>CAB:</b>	
Cab; conventional, steel	Y
Cab interior trim; premium	Y
Mirrors; (2) Lang Mekra, or approved equal rectangular 7.09" x 15.75", breakaway bracket type; 102" wide spacing, with integral convex (both side); all heated heads, thermostatically controlled, with clearance lights LED; powered (both sides) (no exceptions); bright heads & brackets	Y
Mirror; convex, look down (Lang Mekra) right side 6" x 10 ¼ ", bright finish (no exceptions)	Y
Seat, driver; National air suspension, or approved equal; high back with integral headrest, vinyl, isolated with 2 position front cushion adjustment; 6 to 17 degrees seat back adjustment, air lumbar support	Y



Seat, passenger; National air suspension, or approved equal; high back with integral headrest, vinyl, isolated with 2 position front cushion adjustment; 6 to 17 degrees seat back adjustment, air lumbar support	Y
Seat belt; 3-point, lap and shoulder belt type ( <b>both seats</b> )	Y
Arm rest; right, driver seat	Y
Arm rest; left, passenger seat	Y
Grab handle; (2) towel bar type; anti-slip rubber inserts; for cab entry mounted left and right	Y
Floor covering; rubber black	Y
Grab handle; cab interior (1) "A" pillar mounted, passenger side	Y
Grab handle; cab interior (2) "B" pillar mounted, one each side	Y
Step (2); one step per door	Y
Glass; all windows tinted	Y
Cab sound insulation; dash and engine cover insulators	Y
Console; overhead; molded plastic with dual storage pockets	Y
Auxiliary visor; reading lights; smoke gray with black	Y
Headliner; printed cloth	Y
Instrument panel; trim molded plastic; hidden cup holder and ashtray (pull-out)	Y
Sun Visor (4); padded vinyl	Y
Storage pocket; door (2) molded plastic; driver and passenger doors	Y
Cab interior trim panels; molded plastic; full height, all interior sheet metal is covered	Y
Door Trim panels; (2) with cloth insert on bolster; driver and passenger doors	Y
<b>GAUGES &amp; CONTROLS:</b>	
Gauge cluster; English with English electronic speedometer	Y
Gauge; oil temperature; Allison transmission	Y
Instrument panel; center section, flat panel	Y
Window, power (2) and power locks, left and right doors	Y
Warning system; low fuel; low oil pressure; high engine coolant temperature; low battery voltage (Visual and audible)	Y
<b>CAB PAINT:</b>	
Paint; cab two-tone with 1-2 breaks on cab	Y
Paint hood; convention cab; two-tone with 1-2 breaks on cab	Y

Paint class; single custom color	Y
Paint identity; PT-2 single color; instruction # 936; frame/running gear, less fuel tanks	Y
Paint type; Base coat/clear coat, 1-2 tone	Y
Color; 9036 white PT12; 4015 yellow	Y
<b>CHASSIS WARRANTY:</b>	
Basic vehicle; 24 month/unlimited mileage; includes Emergency Breakdown service; with 90-day towing	Y
The Headroom clearance from the finished floor to the overhead ceiling panel shall be 68"	Y
<b>EXTERIOR MODULAR BODY</b>	
<b>EXTERIOR, ALUMINUM BODY CONSTRUCTION</b>	
<b>FRAMES:</b>	
The module body shall consist of an electric welded, unitized aluminum roll cage structure throughout. The framework shall consist of six individual frames that are constructed in such a manner to insure squareness and flatness before being assembled into a box configuration.	Y
<b>MATERIAL:</b>	
All material used on any frame member, corner and upper cove shall be high strength aluminum alloy. This alloy shall be 6061-T6. The use of lesser materials such as 5052 or 6063 is not allowed due to its lesser mechanical properties. The ultimate strength of 6061-T6 is approximately 25% greater than 5052 and 6063 alloy. Material certifications showing 6061-T6 alloy shall be provided upon request to verify the use of this material for all frame members.	Y
<b>WELDING:</b>	
All welding done on any part of the frame structure shall be done by welders tested in welding this alloy and type of structure. Welders testing certifications shall be provided upon request. All butt welds shall have 100% weld penetration using a filler wire approved for this alloy aluminum. All welding shall be done in accordance with American Welding Society (AWS), Structural Welding Code.	Y
<b>FLOOR FRAME:</b>	
The main floor structure shall consist of a primary load bearing support frame. This primary frame shall consist of 2"x3"x.125" square wall tubular aluminum. This primary frame is of critical importance to the structural integrity of the module. The use of channel sections or frame members less than 2" x 3" x .125" is not acceptable due to its moment of inertia and section modulus calculations are less than minimum acceptable. The secondary support frames of the floor frames shall consist of 2"x 2" x .125" (square) and 1 1/2" x 2" x .125" (rectangular) wall tubular aluminum. Areas between exterior compartments and sub-floor support members shall be a minimum of 2"x 2" x .125" (square).	Y

VERTICAL FRAMES:	
FRAMES, Left and Right Sides:	
<p>The vertical left and right side frames shall consist of a heavy duty custom aluminum extrusion members. The vertical corner and horizontal upper "<b>Main Beam</b>" shall consist of an extrusion with the minimum dimensions of 5 3/4 by 3 7/8 inches with a cross section across the web of .1875 inches. Built into the inside edge of the vertical and horizontal section shall be an area where the exterior door seal shall mate. This door jam area shall be designed into, and be part of the main corner extrusion. Door jam sections which are welded in place are unacceptable due to the possibility of the welds cracking which in turn leads to door and or exterior paint cracking and failure. The inside door jam which is part of the structural member (not a welded section) shall have mini-mum dimensions of 1 inch wide by 1 1/4 inches deep and have minimum side vertical wall thick-nesses of .1875 inches. This door seal and jam section shall be recessed behind the exterior surface of the body approximately 7/8 of an inch to allow for the door seal to be placed outboard of the door latches and provide for a full uninterrupted hollow core door seal mounted on every door. Each door of the vehicle shall seal on this integrated section of the extrusion. The outer exterior mounted finish trim shall be epoxied to the body during fabrication. The epoxy used shall be a two part high strength automotive product which can be painted. All parts which utilize epoxy shall not be structural members but just trim sections. The FMVSS 206 Rated door closure bolt shall be mounted directly to this structural member and not to a welded door jam section. Door alignment shall be maintained by discrete alignment grooves extruded in the custom shape. This designed in feature eliminates the need for excessive adjustment allowance which could become maintenance issues at some future time. The area of the structural member which is in contact with the roof box beams shall incorporate a 1/2 inch flange to carry the load of the roof structure and resulting static load when applied. This support flange is utilized to prevent the need for the roof and roof structure to be held in place by the welds only.</p>	Y
<p>The main support, structural members around the door openings shall incorporate a built in door seal and jam surface similar to the one found around the main corner extrusion, with all the strength and design features the same. Two distinctly different types of structural members shall be used for different types of door configurations. Doors which are placed in the modular body which are not adjacent to any other door shall utilize an extrusion with the overall dimensions of 3 inches wide by 2 inches deep. This extrusion shall form the two vertical and two horizontal door seal, and jam surfaces. Doors of this type which are placed on the forward most or rear most positions of the body, shall utilize the main corner extrusion with its built in door seal to act as one side of the structural door seal and jam surface. For the same reason a door which extends the full height of the modular body shall utilize the upper most main corner extrusion for the top horizontal door seal and jam surface. Door configurations which have two doors adjacent to one another shall utilize a structural body extrusion with</p>	Y

minimum dimensions of 4 inches wide by 2 inches deep. Between each door shall be a minimum of a 2 inch structural wall and floor support. Under no circumstances shall two adjacent compartments not include this 2 inch structural member. Similar to previous door structural extrusions this member shall incorporate two built in door sealing surfaces without the need for welding additional parts as stated previously.	
The remaining structural members of the vertical side frames shall utilize 2 inch by 2 inch by .125 inch thick wall and 1 1/2 inch by 2 inch by .125 inch thick wall structural box beam members. All members of the side vertical frames shall be placed at a maximum of 16 inches on center. Closer spacing shall be utilized in areas of critical strength requirements. Along the floor line, shall be 2 inch by 2 inch by .1875 inch structural angle attached to the side frame, which then during assembly into a module shall be fully welded to the floor frame. These members shall act as the main attachment point for the side frames, where the vertical frames meet the floor frame, and at this point of attachment full welds shall be utilized.	Y
<b>VERTICAL FRAMES, Front and Rear:</b>	
The front and rear frames shall be fabricated utilizing the same main structural corner extrusion as the side vertical frame along the horizontal top edge. The remaining structural members of this frame shall utilize 2 inch by 2 inch and 2 inch by 1 1/2 inch by .125 inch structural box beam members. These structural members shall be placed on a minimum of 20 inches on center. A closer spacing shall be utilized in areas of critical strength. Rear facing door openings shall utilize custom aluminum extrusions in place of box beam members as required. The door openings shall be exactly as specified for the doors located on the vertical side frames as described previously.	Y
<b>ROOF FRAME:</b>	
The roof frame of the vehicle shall be fabricated from 2 inch by 1 1/2 inch by .125 inch box beam structural members. The transverse frame members shall be spaced a maximum of 12 inches on center.	Y
<b>MODULE ASSEMBLY:</b>	
The six frames as previously stated shall be assembled into a module, including the floor, front, rear, two sides and roof sub-frame before any of the exterior skin is applied. The structural frame work shall be a self supporting body and not require the use of the exterior skin for structural integrity. The framed body, without the skin shall be capable of supporting the required static load of the vehicle per A.M.D. 001 specifications.	Y
The floor frame shall be welded to the two vertical side frames at the area of the floor, in front and behind the wheelbox area. This welding shall be 100% continuous in these areas.	Y
The full perimeter welding and center bonding of the exterior panels shall enhance the overall strength of the modular body.	Y

<b>SIDE IMPACT PROTECTION</b>	
<b>BODY PROTECTION:</b>	
Per Federal Motor Vehicle Safety standards, the vehicle shall be designed to protect the occupants or equipment from side impacts. This shall be accomplished by both a side impact rail with minimum dimensions of, 2 inch by 5 inch by .125 inch 6061-T6 aluminum alloy, structural box beam member located approximately 24 inches from the lower side rail. Secondly, side impact protection shall be accomplished by full structural members which extend across the body in the transverse direction between the compartments. <b>Modular bodies that do not provide this protection at each compartment location shall be cause for rejection of the vehicle.</b>	<b>Y</b>
<b>MODULAR BODY DOOR PROTECTION:</b>	
In addition to the vertical body sides, each door with a vertical height greater than 30 inches, on the left and right sides of the vehicle shall incorporate a 2 inch by 5 inch by .125 inch 6061-T6 aluminum alloy, structural box beam members. Each member shall be welded to the interior door extrusions. The structural members shall be placed approximately 24 inches from the lower side rail. There shall be no exceptions to side impact protection in modular body doors.	<b>Y</b>
<b>EXTERIOR PANELS:</b>	
The two sides, front and rear shall be covered with .125" thick 5052-H34 stretcher leveled aluminum alloy sheet. The center areas of the sheets shall be applied using "Very High Bond" structural bonding tape. Before any tape is applied to the structure, both the sheets and the structure shall be thoroughly cleaned with an approved solvent. In addition to the structural bonding tape the exterior skin shall be welded along the perimeter corners and along all door openings. This welding is only done in areas that will not show dimple on the finished body module. The side panels of the vehicle shall be single piece and not welded or fabricated.	<b>Y</b>
Additional welding shall be done at the lower rubrail area where the body exterior panels meet the lower structural support members. This welding is done to completely bond the exterior panel to the substructure in an area where weld dimples will not show on the finished vehicle.	<b>Y</b>
<b>ROOF SHEET:</b>	
The roof sheet shall be a one piece sheet of .090" 5052-H34 aluminum. There shall be no seams in the roof panel or any overlapping seams. The roof sheet shall be fully welded to the roof sub-frame from the inside. The outside perimeter of the roof sheet where it meets the upper cove shall be 100% welded prior to painting. This 100% welding eliminates the need for caulks or sealers and the possibilities of water leaks into the body.	<b>Y</b>

<b>CORNER AND ROOF CORNER EXTRUSIONS:</b>	
The exterior body corners and coves shall be an extruded aluminum section made of 6061-T6 aluminum. Both the corners and roof corner extrusions shall have a 1 5/8" radius hollow extrusion design with an inside flat mating surface. The exterior surface shall be designed to form a smooth transition at all corners of the body. The corners shall be designed in such a way as to provide an interlocking surface with the "Main Beam" extrusion. This surface contact shall provide a weld surface to attach the corners to the main beam. The process of attachment shall include threaded mechanical fasteners to pull the two surfaces tight prior to the welding. This provides a completely tight interface surface. To enhance the corner waterproof integrity a recessed sealant groove shall be incorporated into the exterior flanged surface which is in contact with the body and roof exterior panels. This groove allows the surfaces to be sealed to prevent water infiltration and pre-vent corrosion. The corners shall be designed so they are NOT a structural component of the body, but means to provide a smooth exterior transition and water tight surface. <b>NO EXCEPTIONS.</b> Designs which include an integral exterior corner surface/structural member is unacceptable.	Y
<b>CORNER CASTINGS:</b>	
The upper four corners of the module shall have a cast aluminum ball corner that matches the radius of the corner extrusions. This ball corner shall be completely 100% welded in place to pre-vent water leaks and finished to have a smooth transition at the corner.	Y
<b>EQUIPMENT MOUNTING LOCATIONS &amp; REINFORCEMENTS:</b>	
Areas within the body that have equipment mounted or items bolted shall have additional structural members welded in place. The areas are as follows:	Y
1. A .250" thick 1.25" by 2.5" structural angle to mount squad bench and seat belt restraints shall be installed on the side interior walls, including left side attendant seat. The entire assembly shall be tested and certified to F.V.M.S.S 210. Documentation shall be provided upon request.	Y
2. Cot mounts shall be mounted/bolted to structural members welded within the floor structure. Cot mounts shall be tested and meet A.M.D. Standard A.M.D-004. Documentation shall be provided upon request.	Y
3. Rear facing attendant seat pedestal shall be mounted to a reinforced structural channel members between the frame members of the floor structure. The entire assembly shall be tested to and certified to F.M.V.S.S. 210. Documentation shall be provided upon request.	Y
4. The oxygen bottle retention bracket shall be bolted to a reinforcing structure within the storage compartment. Under No Circumstances shall an oxygen bottle be secured to interior cabinets only, they must always be bolted to a structural member of the module body. The entire assembly shall be tested to A.M.D-003. Documentation shall be provided upon request.	Y
5. Reinforcing plates for ceiling dome lights shall be installed between the roof frame members.	Y

6. Double laminated reinforcing plates shall be installed in the front body frame for added strength in the areas where the body is bolted to the cab, in addition to structural angles in the front frame above the cab roof.	Y
<b>SUB-FLOOR:</b>	
An aluminum sub-floor .050" thick shall be installed prior to installation of the 3/4" plywood floor. The sub-floor shall be secured to the floor frame members 1/4-20 mechanical fasteners located every 24". Additionally the sub-floor shall be sealed with pliable automotive sealer, around the entire perimeter and any seams. Seams shall be centered over existing frame members to eliminate movement of sheet.	Y
<b>WHEEL WELL CONSTRUCTION:</b>	
The rear wheel well housings shall be designed to OEM manufacturers recommended clearances. The inner well shall be formed to follow the contours of the wheel and be fabricated from .125 aluminum sheet, and extend down to the lower body skirt level. Tolerances shall include clearance for full tire chains. All wheel well housings shall be completely sealed and undercoated prior to mounting the body.	Y
<b>CAB TO BODY WALK-THRU:</b>	
A cab to body walk-thru entrance shall be installed in the front of the body and rear of cab. In the front of the body the module framework shall be positioned to allow for a minimum opening of 18" wide x 50" high. The openings shall have a full perimeter 5/8" flange on the body side with 3" radius in the corners.	Y
The rear of the cab shall be modified first by removing the rear glass, and replacing with .125" panels and installing a full perimeter 2" x 1" x 14GA steel tubular frame door entrance. The rear of the cab shall be cut away and have the frame welded in place and completely sealed. The frame flange shall have a matching 5/8" flange to align with the opening in the body, and provide approximately a 1 3/4" gap between the cab and body for flexing. Attached to the flange shall be an Automotive Quality EPDM rubber bellows material with steel spring carrier attachment completely sealed at the seam. The seal shall be semi permanent and removable if required at some future time.	Y
At the pass through floor shall be an aluminum threshold plate with a non-skid rubber mat attached. Only one side shall be attached to create a full floating threshold between the cab and body.	Y
The entire perimeter of both the cab and body opening shall be finished with anodized trim. A vinyl covered, padded head bumper shall be installed from both the cab side and the body side of the walk-thru opening.	Y
<b>INTERIOR HEADROOM:</b>	
The Headroom clearance from the finished floor to the overhead ceiling panel shall be 72".	Y
<b>EXTERIOR BODY LENGTH:</b>	
The exterior length of the modular body shall be 176".	Y

<b>BODY MOUNTING RUBBER DONUTS, TYPE I:</b>	
The modular body shall be mounted to the chassis in such a manner to facilitate easy removal for future remounting with other manufacturers vehicle chassis having the cab to axle dimensions. Mounting devices shall be ten (10) high strength 5/8" bolts five (5) on each side. Such bolts shall secure the body to the frame via rubber isolation mounting donuts. The rubber donuts shall be mounted to the frame of the chassis utilizing steel outriggers. The outriggers shall be bolted to the frame rail of the chassis.	Y
<b>DOOR CONSTRUCTION:</b>	
All doors including personnel and compartment doors shall be constructed of a custom designed extrusion made of 6061-T6 aluminum alloy, used in combination with a "Bent Box Pan" exterior door panel. The bent exterior door panel shall be fabricated from .125" 5052-H32 aluminum alloy panels that have the exact properties and quality as the exterior side panels. Each door pan shall be manufactured with a 3/4" sharp inside corner bend to minimize outside bend radius. The custom extrusion shall be 45 degree miter cut and fit into the 3/4" recessed area of the pan. The extrusion shall be fully welded to the door pan along the entire perimeter in addition to 100% welding on the outside corners of the door pan. The door shall have an overall dimension of 2 1/2", with the primary door seal being mounted to the door at the 3/4" dimension of the door exterior pan. The door latching hardware shall be mounted inboard of the seal in all cases. The door shall have gussets welded from the inside and shall be reinforced in areas where windows are to be installed and for areas where heavy objects might be hung from them.	Y
The door extrusion shall be designed in such a way to provide two surface grooves which are used for proper alignment of the hardware concealed within the door. The grooves shall be used for proper in-out placement of the hardware so that proper alignment is always maintained. All slots and cutouts required for the rotary latches shall be machined or stamped prior to the construction of the door.	Y
Door configurations requiring double doors, shall utilize a structural member attached to the adjoining edge of the second opening door. This structural member shall match the seal surface of the door jams on the balance of the door opening. This member shall be welded in place and be a permanent member of the door. Add-on or bolted double door dividers are unacceptable.	Y
<b>DOOR SEALS:</b>	
The door shall incorporate a continuous seal permanently attached around the entire perimeter of the door. Automotive latching hardware shall not interrupt the seal surface. The seal shall be a custom designed hollow core seal specifically designed for hinged doors. It shall be a "Dynamic" type seal with vent holes on the outside edge to allow for easier closing of door against seal. Flat open or closed cell solid rubber "Static" seals are not acceptable for hinged doors.	Y



<b>DOOR HINGES:</b>	
Each door shall be hung with stainless steel continuous hinges. The hinge shall have a 1/4" pin, staked every six inches to prevent the pin from sliding. The hinges shall be held to the door and to the body using 1/4-20 stainless steel threaded machine fasteners, every 4" on both sides; use of rivets on hinges is not acceptable. All vehicle hinge bolts shall be installed with the use of LOC-TITE thread lock material. All hinges installed on the body shall include a Dielectric barrier between the dissimilar stainless steel hinge surface and the painted aluminum body. Only dielectric tape specifically designed for this purpose is acceptable. The tape shall have a dielectric barrier of .0035" and have a dielectric strength of 10,000 volt.	Y
<b>DOOR LATCH HARDWARE:</b>	
Every door shall utilize an automotive type rotary slam latch. All doors used for personnel access shall utilize two latches, one located on the top of the door the other at the bottom. Single point hardware for this type or any other type of door hardware is unacceptable. The latches shall meet FMVSS 206 standard and shall not be modified in any way to jeopardize its integrity. Latch pins without heads intact shall be cause for immediate rejection of vehicle.	Y
All rotary slam latches shall be activated by adjustable steel rods. Cable activated rotary latches are unacceptable. All door hardware and rod assemblies shall be designed to minimize hardware rattle.	Y
Compartments that require double opening doors shall incorporate (2) point latches on first closing door in addition to second closing door. The latches shall be activated by a handle in each compartment door on the exterior which matches the other exterior handles on the vehicle.	Y
All door hardware, including rods and latches, shall be concealed within the inner door panel. Doors with any exposed latching hardware are unacceptable.	Y
All door systems, including latches, hinges and body/door components, shall be tested and certified to meet AMD-002. Test documentation shall be provided upon request.	Y
<b>ANODIZED ALUMINUM DRIP MOLDINGS:</b>	
Anodized extruded aluminum drip moldings shall be provided above all exterior compartment and entrance doors. The moldings shall be attached without the use of unsightly screws and shall be easily replaceable if damaged. This molding shall direct excess water away from the compartment and entrance door opening.	Y
<b>COMPARTMENT DOOR BUMPERS:</b>	
Heavy duty screw on type rubber (Styrene butadiene rubber, SBR) bumpers shall be installed on all compartments that may come in contact with one another.	Y

<b>DOOR SWEEP GASKET:</b>	
All modular body entrance doors shall be equipped with a door sweep EPDM rubber gasket. The rubber shall be attached to the top of the door and prevent water from collecting on the top of the door extrusion and dropping on the operator when the door is opened. The gasket/sweep material shall be installed in such a way as to prevent being torn off and increase its sealing potential when hit with a stream of water.	Y
<b>LOC-TITE:</b>	
All exterior door hinge bolts, inner door panels on both compartment and entrance door panel, and door latching bolts shall be installed with the use of LOC-TITE thread locking material. <b>(Vehicles that are built without the use of Loc-Tite will be cause for rejection of the vehicle.)</b>	Y
<b>TRIMARK ENTRANCE DOOR HANDLES:</b>	
The right side and right and left rear entrance doors shall incorporate a Trimark automotive style paddle handle. This handle shall activate an F.M.V.S.S. approved rotary style automotive door latch, two latches per door. Single point door latches for entrance doors are unacceptable. The exterior handle shall have a black housing and chrome release paddle. Mounting hardware shall not be exposed to the outside for security reasons. The inside handles on all entrance doors including the left rear door, shall have a matching automotive design, flush paddle release type designed specifically for use with this system. All door hardware shall incorporate a custom designed rod activation system. This system shall be used in at least 500 Ambulances in service. Prototype systems are unacceptable. All rods used for interior door release mechanisms shall incorporate anti-rattle devices to prevent door hardware noise.	Y
<b>TRIMARK COMPARTMENT DOOR HANDLES:</b>	
All compartment doors shall incorporate automotive style paddle handles. This handle shall activate an F.M.V.S.S. approved rotary style automotive door latch. The exterior handle shall have a black housing and chrome release paddle. Mounting hardware shall not be exposed to the outside for security reasons. All door hardware shall incorporate a custom designed rod activation system. This system shall be use in at least 500 Ambulances in service. Prototype systems are unacceptable.	Y
<b>GAS SPRING DOOR HOLDERS:</b>	
All hinged compartment doors and right side entrance door shall incorporate a pneumatic gas spring door holder. The mounting bracket, piston end for the door side, shall be secured to the 1/4" gusset welded within the door. The door holder gas spring end shall be attached to a structural angle attached to the upper door header. The gas spring shall be installed with a 10 degree pitch downward to improve function and extend life of gas spring.	Y

<b>REAR ENTRANCE DOOR HOLDER, "GRABBER":</b>	
The rear entrance doors shall incorporate a Cast Products, Grabber door holder device. This device shall hold the door at approximately 170 degrees. The door holders shall be securely bolted to the vehicle substructure of the body.	Y
<b>COMPARTMENTS:</b>	
Exterior compartment dimensions reflect wall to wall measurements.	Y
<b>COMPARTMENT "A":</b>	
Left front, full height storage of a medical oxygen cylinder in a KKK certified bracket. Provisions shall be made for backboard equipment storage.	Y
Storage for Oxygen Bottle Un-loader, Zico "Eze-Load"	Y
Dimensions: 23" wide x 83" high x 21 3/4" deep	Y
<b>COMPARTMENT "B":</b>	
Left side half high storage; in front of left rear wheel. Two (2) adjustable aluminum diamond plate shelves shall be mounted on Uni-strut shelving standards.	Y
Dimensions: 43 3/8" wide x 39" high x 21 3/4" deep	Y
<b>COMPARTMENT "C":</b>	
Left rear half high compartment; behind left rear wheels with two (2) adjustable aluminum diamond plate shelves shall be mounted on Uni-strut shelving standards.	Y
Dimensions: 30 1/2" wide x 39" high x 21 3/4" deep	Y
<b>COMPARTMENT "D":</b>	
Right front inside/outside storage compartment. This compartment shall allow access to contents from the exterior or the interior of the vehicle above the vehicle floor level. Below the floor shall be an outside only access of the lower compartment.	Y
Dimensions: 17" wide x 52" high x 21 3/4" deep	Y
<b>COMPARTMENT "E":</b>	
Right rear 24" wide compartment; behind right rear wheels for storage.	Y
Dimension: 24 1/2" wide x 83" high x 21 3/4" deep	Y
<b>EXTERIOR COMPARTMENT CONSTRUCTION:</b>	
The exterior compartments shall be fabricated from fully enclosed aluminum sheets. The floor and ceiling material shall be fabricated from .125" aluminum sheets. Each compartment shall be its own independent unit with two sides, rear, top and bottom, and not share a common wall with an adjoining compartment. All vertical seams of the compartment shall be continuous one piece bend or 100% welded construction. Overlapping caulked vertical seams are unacceptable. Each	Y

compartment unit shall be welded to the inside of the structural door jam. All compartments shall include a reinforced floor, designed to carry the load of equipment to be carried. Compartment vents shall be installed in all exterior compartments. The vents will allow air to escape and allow the door to close easier. The vents are added to an area above floor level to prevent road debris from entering the compartment.	
All compartments shall incorporate a flush sweep out design. No compartment floor lips or door gaskets shall come above or protrude into the compartment opening at all.	Y
<b>STEPWELL COMPARTMENT:</b>	
Inside the side entrance door shall be a recessed stepwell compartment. The compartment shall extend into the body approximately 12" and be the full width of the side entrance door. The vertical sides of the compartment shall be fabricated from .100 polished aluminum diamond plate. The floor shall include non-skid turtle tile, removable with a drain/sweep out plug for ease of cleaning. Aluminum diamond plate on the floor is unacceptable due to the slippery surface when wet. The sub-floor of the compartment shall be fabricated from 3/16" aluminum plate to provide a heavy duty walk surface which will not flex under foot. The upper edge where the stepwell meets the flooring material shall include non-slip polished aluminum threshold trim which is screwed in place.	Y
<b>EXTERIOR COMPARTMENT SHELVES:</b>	
All shelves as specified in exterior compartments shall be fabricated from .125" formed aluminum diamond plate with a 1" flange bent up on both the front and rear of the shelf. The shelf shall be mounted to heavy duty UNISTRUT shelving standards to allow for full adjustment. The front edge of the shelf shall be finished with a Trim-Lock snap on vinyl edging.	Y
<b>EXTERIOR COMPARTMENT FINISH:</b>	
The rear and two side walls of the interior surface of the exterior compartments shall be fabricated from 100% welded, .080" polished aluminum diamond plate panels.	Y
<b>COMPARTMENT DOOR PANELS:</b>	
Interior door panels on compartment doors shall be made of .100" polished aluminum diamond plate held on with threaded fasteners that provide access for repairs or replacement of hardware.	Y
<b>STAINLESS STEEL DOOR SILL PROTECTION PLATES</b>	
Heavy duty stainless steel protection plates shall be installed on the lower edge of all entrance and compartment door openings. The plates shall be a formed polished stainless steel angle with dimensions of 1/2" x 1", by full width of the door opening. The angle plates shall be permanently mounted without the use of screws and be removable for replacement if necessary. All edges shall be filed and deburred for a finished appearance.	Y

<b>OXYGEN COMPARTMENT VENTING:</b>	
The oxygen compartment shall be vented to the exterior of the vehicle. The vents shall be located in the lower portion of exterior compartment. The vents shall have a total of 9 square inches.	Y
<b>MATFLEX FLOOR MATTING:</b>	
Matflex material shall be installed on all floors of the exterior compartments. The Matflex shall be custom cut to fit around oxygen bottles and mounted equipment. The flush sweep-out floor edges shall include the Matflex tapered edges.	Y
Color: Black	Y
<b>RUBBER MATTING SHELVES:</b>	
A .125" rubber mat material shall be installed on all shelves of the exterior compartments. The rubber matting material shall be custom cut to fit each compartment shelf.	Y
<b>SIDE ENTRANCE DOOR STEPWELL:</b>	
The floor of the stepwell compartment shall be lined with nonskid Turtle Tile mat. The mat shall be removable for ease of cleaning.	Y
<b>SECURING DEVICES FOR EQUIPMENT</b>	
<b>BACKBOARD MOUNTS:</b>	
The right rear full height compartment shall be provided with (3) black rubber friction mounts for securing three (3) backboards. The mount shall be fabricated from an "L" shaped (45"h x 16"d) 2" aluminum channel. The channel will be bolted to the interior compartment. The rubber friction mount shall be press fitted onto each side of the 2" channel, full length. Proper spacing shall be provided to allow for Long Boards with runners.	Y
<b>BACKBOARD MOUNTS:</b>	
The compartment as specified below shall be provided with black rubber friction mounts for securing backboards. The mount(s) shall be fabricated from an "L" shaped (45"h x 16"d) 2" aluminum channel. The channel will be bolted to the interior compartment. The rubber friction mount shall be press fitted onto each side of the 2" channel, full length. Proper spacing shall be provided to allow for Long Boards with runners.  Qty: (1), Location: Compartment "E" Total of (3) - Backboards to be located forward of divider.	Y
<b>MOUNTING LOCATIONS FOR EQUIPMENT:</b>	
The compartment as listed below shall be equipped with a full height divider 12" off front wall, with one side for long equipment storage and one 10.25" adjustable shelf on the other side of the divider. The divider shall be fabricated from a 0.125" aluminum panel with flanges on top and bottom and back edge for better attachment to the compartment. Dividers will be finished off with a "Powder Coat" paint process. The shelf shall be mounted on four sections of aluminum Uni-strut, and be fully adjustable.	Y

<b>EQUIPMENT SECURING DEVICE:</b>	
The compartment(s) as listed below shall be provided with nylon strap(s) with metal buckle for securing the following equipment;  Qty: (2), Location: Right rear compartment "E", from divider to left wall, (1) above shelf, (1) below shelf. Equipment: (2) Short boards, (2) KED's and #42 Stair chair.	Y
<b>REAR STEP BUMPER:</b>	
A full length reinforced rear bumper shall be installed on the rear of vehicle. The bumper shall be fabricated from 3" aluminum channel and securely bolted to the vehicle frame using high strength, grade 8, 1/2" bolts. The bumper shall have contoured ends and be covered with polished aluminum diamond plate end caps.	Y
The bumper shall incorporate a design that allows it to be recessed under the rear of the body. Any rear bumper design that does not have a recessed design shall be unacceptable. The under body recessed bumper design allows the chassis frame to absorb minor impact without any damage to ambulance body.	Y
<b>LIFT-UP REAR STEP:</b>	
The rear step bumper shall incorporate a 48" lift-up center section made of open grid, Diamond-Back, ribbed heavy duty extruded aluminum. The Diamond-Back shall hinge on a full length stainless steel piano hinge. The Diamond-Back shall hinge on a full length stainless steel piano hinge.	Y
<b>DOCK BUMPERS:</b>	
Two (2) Heavy duty black rubber dock bumpers shall be installed on the rear bumper ends, (1) each side. The bumpers shall be 2" high, 10" long and protrude 2" outward from rear bumper. The dock bumpers shall be bolted to the structural channel of the rear step bumper.	Y
<b>REAR STEP RISER PANEL:</b>	
A polished aluminum diamond plate step riser shall be installed above the rear step bumper and below the rear doors. The panel shall fit flush on all sides and not appear to be an add-on part. The step riser panel shall be removable.	Y
4" Polished aluminum diamond plate panels shall be installed on the rear body corners. Panels shall extend to the rear step riser, and protect the lower area of the body around the rear recessed bumper step.	Y
<b>FRONT STONE GUARDS:</b>	
22" High polished .100 aluminum diamond plate stone guards shall be installed on the front body corners. The guards shall be one piece & contoured to fit the 1 5/8" outside radius of the body. They shall extend to the cab, and follow the contour of the cab. The stone guards shall be removable for repair in event of damage. The edges of the diamond plate panels shall be sealed with a closed cell gasket around the perimeter, to prevent moisture from getting behind panels. All panels shall be fastened with stainless steel fasteners for ease of removal if required.	Y

<b>DIAMOND PLATE RUB RAILS:</b>	
Heavy duty polished aluminum diamond plate rub rails shall be installed on the lower body skirt panels under the door line. The rub rails shall be fabricated from a 2" x 2" x .125 aluminum sub tube with 45 degree mitered ends. The ends shall be capped and then fitted with a Heliarc welded polished aluminum diamond plate cover. The rub rails shall be bolted on, in a manner that no fasteners will show to the exterior of the body. The rub rails shall be spaced off the body by .125" nylon spacers for corrosion resistance and washdown purposes.	Y
<b>DIAMOND PLATE CURB SIDE STEPS:</b>	
The curb side shall be custom fitted with upper and lower aluminum grip strut steps. The steps shall be welded on. All seams and corners shall be 100% Heliarc welded for strength and a finished appearance.	Y
<b>DIAMOND PLATE STEP/SLIDE-OUT BATTERY COVER:</b>	
A full polished aluminum diamond plate enclosure shall be fabricated and installed on the opposite side of the cab fuel tank. The enclosure shall include a hinged access door to allow access to the vehicle batteries. The batteries shall be mounted on a slide-out tray utilizing (2) heavy duty grant slides and lock in the stored position. The enclosure shall have the same finish and appearance as the fuel tank cover on the other side of the vehicle.	Y
<b>EXTERIOR TRIM</b>	
<b>REAR WHEEL FENDERETTES:</b>	
Polished Stainless Steel, rolled fenderettes shall be installed around the rear wheel opening sized to allow for proper tire clearance. The fenderettes shall be bolted on for easy removal. All hardware shall be concealed. Exposed mounting hardware is unacceptable.	Y
<b>LICENSE PLATE HOLDER:</b>	
A recessed Cast Products polished aluminum license plate holder shall be installed in the rear body panel of the ambulance. It shall include (2) recessed license plate lights activated with the parking lights of the vehicle.	Y
<b>EXHAUST VENT COWL:</b>	
A left side mounted, polished aluminum type exhaust vent cowl shall be installed on the vehicle. The cowl shall allow air from the power exhaust vent to exit the interior of the vehicle. The inside of the cowl vent shall have a rubber flap to prevent air from back feeding vent when not in use.	Y
<b>FRESH AIR MAKE-UP:</b>	
Fresh air intake to the rear of the vehicle shall enter from the front fresh air makeup system of the cab. Body mounted air intake mounts are not required.	Y

<b>FUEL FILL HOUSING:</b>	
A Cast Products Polished Aluminum fuel fill housing shall be installed in the street side body panel. The fuel fill shall be designed to match the O.E.M. mounting procedures and shall not cause any undue stress on any of the fuel components. The fuel fill housing shall be completely sealed from the inside of the vehicle.	Y
<b>ADDITIONAL EXTERIOR EQUIPMENT:</b>	
<b>BODY UNDERCOATING:</b>	
The entire under side of the modular body, including all frame members, compartment lower panels and aluminum sub floor, shall be undercoated. The undercoating shall be applied to insure proper and complete coverage. The undercoating shall be a high quality automotive type.	Y
<b>EXTERIOR BODY WINDOWS</b>	
<b>SIDE DOOR WINDOW:</b>	
An 18"W x 22"H window shall be installed in the side entrance door. The window shall have 31% tinted automotive safety glass and be completely sealed and held to the door via an inside clamp ring which matches the exterior of the window.	Y
<b>REAR DOOR WINDOWS:</b>	
Two (2) 15" x 22"H windows shall be installed in the rear entrance doors. The windows shall have 31% tinted automotive safety glass and be completely sealed and held to the door via an inside clamp ring, which matches the exterior of the window.	Y
<b>MYLAR TINTED ENTRANCE DOOR WINDOWS:</b>	
The side and rear entrance door windows shall be dark privacy tinted, by the addition of a Mylar film to the inside of the door windows. The installation shall be free of air bubbles and other defects.	Y
<b>INTERIOR MODULAR BODY</b>	
<b>CABINET CONSTRUCTION:</b>	
The interior cabinets of the vehicle shall be completely constructed of 3/4" and 1/2" premium grade, cabinet birch plywood. All cabinets shall be held together with glue, staples and threaded screw fasteners. Each cabinet shall include a reinforced attachment point where it is secured to the vehicle framework. All cabinets shall be attached directly to the vehicle framework and all mounting bolts shall be used, on a maximum of 16" centers for any cabinet.	Y
All cabinets shall be covered with "Formica" type high pressure plastic laminate and trimmed with aluminum moldings for a finished appearance. Raw wood or unfinished edges of any kind including aluminum panels, are unacceptable.	Y
All outside edges of cabinets shall be finished with anodized aluminum three quarter round moldings. The molding shall have dimensions of approximately 3/4" x 3/4" and will be held in place with recessed screws.	Y



<b>WALLS:</b>	
All walls of the vehicle shall be fabricated using 1/4" plywood covered with color coordinated high pressure plastic laminates. All walls shall be held on using threaded fasteners and finished with anodized aluminum moldings in all corners and edges.	Y
<b>ADJUSTABLE SHELVES:</b>	
All adjustable shelves within the interior cabinets shall be mounted to Uni-strut shelving standards. Each cabinet shall be equipped with four adjustable standards for each cabinet and have (4) retaining clips for each shelf. The shelf will have 2 securing screws attached to retaining clips. The shelf shall be the full width and depth of the cabinet, have a 1" lip on the front edge, and shelf shall be finished to match the interior surfaces of the cabinet.	Y
<b>HINGED DOORS:</b>	
All hinged doors shall be equipped with a full length piano hinge and a positive latching device to prevent opening while in motion. All surfaces of the door including the edges shall be finished to match the interior of the vehicle cabinets.	Y
<b>WIRE RACEWAY:</b>	
A full length drop down wire raceway shall be installed down the center of the ceiling. It shall be finished with padded vinyl material to match the upholstery in the vehicle. Vehicles which utilize wire raceways above or behind interior cabinets are unacceptable.	Y
<b>SOPHFIT TRIM:</b>	
A vinyl covered soffit trim piece shall be installed around the perimeter of the interior cabinets where they meet the ceiling. This trim shall be added to allow access to the cabinet mounting bolts and provide a finished transition between the ceiling and cabinet surfaces.	Y
<b>INSULATION</b>	
<b>MODULAR BODY INSULATION:</b>	
The entire inside surface of the modular body, including walls and ceiling, shall be insulated with a minimum of 2" thick "Thinsulate" insulation. Areas behind heat generating light fixtures shall not be insulated. The insulation shall completely fill the voids between the frame members and the exterior skin.	Y
3-M Thinsulate insulation is superior to that of Fiberglass insulation in both the acoustical and thermal properties of the material. The Thinsulate material will not hold or absorb water, therefore will not mildew over time in the vehicle as compared to the potential with a fiberglass material. Other methods of insulation will be unacceptable.	Y
In addition to the modular body insulation the interior surfaces of the rear wheelwells and the exterior surface of the side entrance door stepwell shall be sound deadened with a composite acoustical sound deadening material. This material is specifically designed for the reduction of transmitted sound in single skin aluminum panels and shall not be substituted with other spray on products or undercoating type material.	Y

Bidders must provide complete description of their ambulance body insulation methods with bid proposal submitted.	Y
<b>MODULAR BODY ENTRANCE DOOR INSULATION:</b>	
All exterior entrance doors shall be sound deadened with a composite acoustical sound deadening material. The entire exterior skin surface of the interior door shall have this material bonded to it. The modular personnel entrance doors shall have an additional thermal insulation of 2" thick "Thinsulate" bonded in place, with clearance provided for door hardware.	Y
<b>MODULAR BODY COMPARTMENT DOOR INSULATION:</b>	
All exterior compartment doors shall be insulated and sound deadened with a slow rise foam in place insulation and sound deadening material. The entire exterior skin surface of the interior of the door shall have this material bonded to it. The use of fiberglass or undercoating type material is unacceptable in an exterior door application.	Y
<b>SOUND DEADENED FLOOR:</b>	
The floor shall consist of a completely sound deadened plywood composite material, 3/4" thick. It shall include laminated "within" the plywood, a sound deadening material. The sound deadening material laminated within the floor eliminates the need for other products added to the underside of the floor material which can hinder under body heat management. The material shall be manufactured into the sub-floor material and shall be a single homogeneous product. Add-on products are unacceptable. <b>(no exceptions)</b>	Y
<b>FRONT BULKHEAD WALL</b>	
<b>FRONT WALL PASS THRU:</b>	
Centered in the front wall of the modular body shall be a pass through opening. It shall have a hinged door with a window mounted within it. The door shall have a recessed door pocket to maintain a clear opening and to prevent protrusion into the opening. The approximate opening size shall be 50" high by 18" wide. The door shall be held open by a gas spring door check, and held closed by a Southco, or approved equal "D" ring type, slam latch assembly. The use of elbow latches or slide bolts is unacceptable hardware for this application.	Y
<b>HEATER/AIR CONDITIONER CABINET:</b>	
The Heater/Air Conditioner cabinet shall be provided in the upper most area, centered above the cab to body pass-thru. This cabinet shall be designed in such a way to allow for quick easy removal of Heater/Air Conditioner unit without the removal of any other equipment. The interior of the cabinet shall be designed to allow fresh air intake from the front of the exterior body and exit to a closable vent located under the cabinet platform. The vent allows fresh air from the exterior of the vehicle to shut off in the summer months for maximum air conditioning performance. The lower platform shall also allow adequate return air flow to the Heater/Air Conditioner unit. The air return shall have a minimum air opening in the cabinet for two 6" by 10" filtered re-turn grills.	Y

<b>ELECTRICAL DISTRIBUTION CABINET:</b>	
The Electrical Distribution Cabinet shall be located on the front left wall of the body. The cabinet shall be approximately 16" deep x 18" wide and run from the floor to the underside platform of the heater/air conditioner cabinet. The cabinet shall have a single removable aluminum door secured with four threaded fasteners. All the main wiring harnesses shall terminate within this compartment. Cabinet shall be provided adequate compartment ventilation. The cabinet access door shall be covered in heavy duty vinyl to match interior upholstery.	Y
<b>RIGHT FRONT UPPER INTERIOR CABINET</b>	
<b>RIGHT FRONT INTERIOR STORAGE CABINET, UPPER WITH RESTOCKING LIFT-UP DOOR:</b>	
In the upper most portion of the right front bulkhead area shall be a cabinet with a full framed sliding transparent cabinet door which is also capable of lifting for full restocking access to the cabinet. The door shall be held open with two gas springs and held closed with two positive slam latches. The frame shall be made of a custom designed aluminum extrusion and held together with (4) #10 mechanical fasteners in each corner; glued or epoxied construction is unacceptable. The cabinet shall extend from the top of the inside outside portion of the right front to the ceiling of the vehicle. Approximate dimensions 11" high by 28 1/2" wide by 18" deep.	Y
<b>RIGHT FRONT IN/OUT INTERIOR CABINET</b>	
<b>RIGHT FRONT INSIDE/OUTSIDE ACCESS STORAGE COMPARTMENT:</b>	
The interior right front lower storage cabinet of the vehicle shall be designed to provide access from both the inside of the vehicle or through the exterior compartment door. The width of the compartment from the inside shall extend to the pass thru area to the cab. Approximate dimensions 23 1/4" high by 30" wide by 18" deep.	Y
<b>RIGHT FRONT INSIDE/OUTSIDE COMPARTMENT HINGED DOORS:</b>	
The right front inside/outside access cabinet shall incorporate double hinged 1/2" tinted acrylic transparent doors. The doors shall have hinges that resist motion when moved to prevent doors from swinging freely when the vehicle is moving. The doors shall also incorporate (1) Southco positive type locking latch in each hinged door.	Y
<b>LOCKING DRUG CABINET:</b>	
A locking drug cabinet shall be installed in the interior right front middle storage cabinet of the vehicle. The cabinet shall have double solid wood doors flush with cabinet, and have black knob type locks. There shall be a fixed center divider with one (1) adjustable shelf on each side. Approximate dimensions: 22 3/4" high x 30" wide x 21 1/4" deep.	Y

<b>RIGHT SIDE SQUAD BENCH</b>	
<b>SQUAD BENCH:</b>	
A full length squad bench shall be provided on the right side wall. It shall have dimensions of approximately 81" long x 19" high x 20" deep. The squad bench shall be bolted to reinforced members of the framework utilizing 7/16" high strength bolts. The storage area of the squad bench shall be accessible by lifting the seat cushions.	Y
The bench shall have upholstered padded 3" thick seat cushions and backrest. The seat and backrest cushions shall be approximately 18" wide x 72" long. The lower cushion shall be removable and easily cleaned or replaced if damaged. The cushions shall be held to the platform with #8 screw type mechanical fasteners, which are screwed into the permanently attached plate on the underside of the cushion. The cushion/lid shall be held open and closed by two (2) gas spring hold opens and hinged at the rear with full length piano hinges. The mounts for the gas spring shall be installed into reinforced areas within the seat lid platform.	Y
<b>SQUAD BENCH UNDER SEAT STORAGE AREA:</b>	
The inside area of the squad bench shall be laminated with high pressure plastic laminates. Floor to be lined with ribbed rubber.	Y
<b>BACKREST/STRETCHER COMPARTMENT:</b>	
The squad bench backrest shall be custom built in such a way as to allow the entire backrest to drop down and lay flat on the top surface of the squad bench lid. (The backrest shall have a full length hinge along the entire bottom edge). The inside surface of the drop down backrest shall incorporate a pair of seat belt type patient restraints securely bolted to the wall, to hold a stretcher while in motion. The backrest shall provide positive slam type closure devices to hold the backrest up in the normal position, and also two (2) recessed Southco "D" ring, or approved equal release handles to aid in dropping the backrest.	Y
A storage area shall be provided behind the backrest, capable of holding a #65 Scoop stretcher when not in use. The stretcher shall be secured with two (2) vinyl coated storage hooks located on the back wall.	Y
The inside surface of the drop down shall be covered with Lonplate II #424 Gunmetal flooring material. The remainder of the compartment is laminate. Storage hooks shall be provided on the back wall of the compartment for #65 Scoop.	Y
Backrest to be secured, or approved equal with Southco round latches.	Y
<b>PADDED ARMREST/BENCH SEAT STOP:</b>	
A specially designed polished stainless steel squad bench armrest and seat stop shall be installed at the head of the squad bench. It shall be fabricated from 1" polished stainless steel welded tube and bolted onto the forward end of the squad bench. It shall also include a wrap around vinyl padded cover on the squad bench face and top surface as well as a vinyl storage pouch on the forward side. The color of the padded vinyl shall match the seat upholstery color.	Y

<b>RECESSED "D" BOTTLES AT HEAD OF BENCH:</b>	
Recessed storage shall be provided for two (2) "D" bottles at head of the squad bench. To provide the recessed area, the stepwell shall be modified to extend under the squad bench by approximately 6". Access to bottles shall be from the step well. Storage requires mounting in Ferno Washington Model #521 brackets.	Y
<b>SPLIT SQUAD BENCH LID:</b>	
The lower cushion and platform of the squad bench shall be divided into two sections. Each section shall open independently of the other and have its own hold open and closure device attached to the outside corner.	Y
<b>SQUAD BENCH LID HOLD DOWN DEVICE:</b>	
The split lids of the squad bench shall be equipped with two (2) slam type positive closure devices. This closure device shall prevent opening of squad bench lid in the event of an accident. The release shall be a stainless steel slam type Trimark paddle handle located on the outside surface of the squad bench, and incorporate a catch device on the under side of the lid. Each opening lid shall have its own closure device for independent operation.	Y
<b>TIP-OUT SHARPS CONTAINER:</b>	
A Tip-out Sharps Container shall be provided at the head of the squad bench base cabinet. It shall be custom built into the squad bench and provide a hinged tip out door and flush Southco latch to access a removable disposable 8 qt. Sharps Container with rotary opening.	Y
Customer Supplied Sharps Container, Sage P/N #8501 Dims: 10 1/2"w x 6 1/6"h x 4 1/2"d	Y
<b>OVERHEAD STORAGE ABOVE SQUAD BENCH WITH RESTOCKING LIFT-UP CABINET DOOR:</b>	
A storage cabinet shall be provided and installed the full length of the squad bench and extend from the backrest to the ceiling. The cabinet shall be flush and not protrude beyond the depth of the backrest (Approx 5" usable storage depth). The cabinet shall have two (2) shelves, one on each side of the center divider. The interior cabinet shall be provided with a full framed sliding transparent cabinet door which is also capable of lifting for full restocking access to the cabinet. The door shall be held open with two gas springs and held closed with two positive slam latches. The frame shall be made of a custom designed aluminum extrusion and held together with (4) #10 mechanical fasteners in each corner; glued or epoxied construction is unacceptable. The area in the forward portion shall incorporate the right side oxygen outlet.	Y
<b>LEFT SIDE ATTENDANT SEAT:</b>	
A left side attendant seat shall be built into the left wall cabinets. It shall incorporate a 24" wide x 20" deep seat area with a cushion which is 21" above the floor, a backrest, and a separate headrest.	Y

In order to prevent injury during vehicle motion both the forward and rear cabinets that are immediately adjacent to the left side attendant, seat shall include full size padded head bumpers with a 1" thick padding. Designs which do not include this padding are unacceptable.	Y
All vertical surfaces to the front and rear of the seat cushion shall be fully padded and wrap around the top of the counter to provide a full armrest.	Y
<b>LEFT SIDE ATTENDANT SEAT BACKREST:</b>	
A left side attendant seat shall include a full height backrest cushion which extends from the seat to the ceiling. The backrest cushion shall be approximately 2" thick.	Y
<b>LEFT SIDE ATTENDANT SEAT, UNDER SEAT STORAGE:</b>	
The underside of the left side attendant seat shall be lined with a brushed aluminum pan covered with indoor/ outdoor carpet and allow for full under seat storage. The seat cushion shall be hinged in the rear and be held open and closed by a single gas spring device. The seat cushion shall be equipped with a slam type positive stainless steel Trimark paddle latch.	Y
<b>LIFE SUPPORT STATION</b>	
<b>LIFE SUPPORT STATION/SWITCH PANEL:</b>	
The rear Life Support control and switch panel shall be mounted to the underside of the upper cabinet. The oxygen outlets shall be mounted in the panel to provide use of a ball type flow meter with humidifier bottle attached. The entire panel shall be hinged to provide full access of components for servicing. An adequate area shall be provided along side the switches for permanent built-in installation of two-way communications radio.	Y
<b>SWITCH PANEL COVERING:</b>	
The switch panel shall be laminated with high pressure plastic laminates. The laminate shall match the color of the interior cabinets.	Y
<b>LIFE SUPPORT STATION STORAGE CABINET:</b>	
A storage cabinet shall be provided at the head of the Life Support Switch Panel. The storage cabinet shall have a hinged 1/2" acrylic door with a Southco positive latch and one (1) adjustable shelf within the cabinet.	Y
<b>LIFE SUPPORT STATION UPPER STORAGE CABINET WITH RESTOCKING LIFT-UP DOOR:</b>	
A storage cabinet shall be provided above the Life Support Control Panel. The rear most edge shall have a 45 degree angled panel to eliminate any obstructive corners in the area of the Life Support Station working area. The rear surface shall be covered with a padded head bumper surface. The storage cabinet shall be provided with a full framed sliding transparent cabinet door which is also capable of lifting for full restocking access to the cabinet. The door shall be held open with two gas springs and held closed with two positive slam latches. The frame shall be made of a custom designed aluminum extrusion and held together with (4) #10 mechanical fasteners in each corner; glued or epoxied construction is unacceptable. One (1) adjustable shelf shall be provided within the cabinet. The entire lower edge shall be padded to prevent sharp edges.	Y

<b>COUNTER AREAS:</b>	
All open counter areas within the Life Support Station shall have a 1" high x 1/2" wide lip built into the lower cabinets. All edges shall be finished with anodized aluminum three quarter round trim for high wear areas and to eliminate sharp edges on any cabinets.	Y
<b>TIP-OUT SHARPS CONTAINER:</b>	
A tip-out sharps container shall be provided at the Life Support Station below the counter of the ambulance. It shall be custom built into the lower cabinetry and provide a hinged tip out door and latch to access an 8 qt. disposable Sharps Container. Customer Supplied Sharps Container, Sage P/N #8501 Dims: 10 1/2"w x 6 1/6"h x 4 1/2"d	Y
<b>CLOCK:</b>	
A 24 hour / 12 volt clock with sweep second hand shall be installed in the 45 degree sloped panel above the Life Support panel.	Y
<b>CLOCK CABINET:</b>	
An interior storage cabinet shall be built behind the clock located on the 45 degree upper Life Support cabinet. The cabinet shall have a hinged solid door with a Southco black knob latch.	Y
<b>LEFT REAR STORAGE CABINETS</b>	
<b>LEFT REAR INTERIOR CABINET UPPER WITH RESTOCKING LIFT-UP DOOR:</b>	
A storage cabinet shall be provided in the upper left rear corner of the body. The cabinet shall have sliding transparent doors and one (1) adjustable shelf. The storage cabinet shall be provided with a full framed sliding transparent cabinet door which is also capable of lifting for full restocking access to the cabinet. The door shall be held open with two gas springs and held closed with two positive slam latches. The frame shall be made of a custom designed aluminum extrusion and held together with (4) #10 mechanical fasteners in each corner; glued or epoxied construction is unacceptable. The entire lower edge corner shall be padded to prevent sharp corners.	Y
<b>LEFT REAR INTERIOR CABINET, LOWER:</b>	
A storage cabinet shall be provided in the lower left rear corner of the body above counter level. The cabinet shall be divided into 2 compartments approximately 22" wide by 17" high. The rear compartment shall have two (2) 1/2" acrylic hinged transparent doors, each with a Southco positive latching device and one (1) adjustable shelf. The forward compartment shall have a clear shutter type door and a floor mounted pull-out tray. The tray shall be equipped with a strap to secure a defibrillator. A partial depth adjustable shelf shall be provided for storage of equipment. Shelf shall be constructed of 3/4" two side laminated birch plywood and be provided with 1" lip and allow for clear access to equipment mounted on the slide out tray.	Y

<b>LEFT REAR BELOW COUNTER LEVEL INTERIOR STORAGE:</b>	
An interior storage cabinet shall be located directly behind the left side attendant seat, (Below counter level) It shall be approximately 24" wide x 18" high x 20" deep. The cabinet shall have sliding transparent doors and one (1) adjustable shelf. Includes (1) adjustable shelf Cabinet to be notched for fuel fill.	Y
<b>INTERIOR CABINET DOORS</b>	
<b>TINTED TRANSPARENT DOORS:</b>	
All transparent doors where specified in this specification shall have tinted Lexan sliding doors. All sliding doors shall be installed in double, anodized aluminum tracks with Standard Products rubber flocked inserts to prevent movement and inadvertent sliding. Hinged transparent doors when specified will be provided as 1/2" tinted acrylic.	Y
<b>FULL LENGTH HANDLES ON TRANSPARENT DOORS:</b>	
All sliding doors shall have anodized aluminum full length pull handles installed on the leading outside edge of the door. An anodized trim shall be installed on the edge of the following side of the door for a finished appearance. The use of finger holes or screw on cabinet handles is unacceptable.	Y
<b>POSITIVE CLOSURE DEVICES ON HINGED DOORS:</b>	
All hinged doors shall be equipped with a positive closure device such as a Hartwell, or approved equal trigger latch or Southco, or approved equal slam latch. Magnet or roller type catches are unacceptable hardware for this application. The use of positive latching types of hardware will prevent inadvertent opening when in motion.	Y
<b>UNISTRUT SHELVING STANDARDS, INTERIOR CABINET SHELVES:</b>	
The interior cabinets of the vehicle shall be provided with Uni-strut shelving standards. The standards shall be aluminum with the approximate dimensions of 3/8" by 1" wide. The Uni-strut shall be securely fastened to the interior of the cabinets with #10 threaded fasteners.	Y
<b>INTERIOR ENTRANCE DOORS:</b>	
All entrance door panels shall be mounted with machine screw threaded fasteners which are installed with thread locking, Loc-Tite material.	Y
<b>INTERIOR ENTRANCE DOOR PANELS:</b>	
The inside surface of the right side and rear entrance doors shall have three (3) sections. The upper shall be an aluminum panel covered with high pressure plastic laminates which matches the interior cabinets. The center area which covers the door hardware shall be a padded vinyl section and the lower panel shall be a single piece of polished aluminum diamond plate, to act as a wear surface. The panels shall be held in place with threaded mechanical fasteners and be removable for servicing of door hardware.	Y



<b>INTERIOR GRAB RAILS</b>	
<b>GRAB RAIL RETENTION:</b>	
All ceiling grab rails installed in the ambulance shall meet the requirements of the A.M.D grab rail retention test. Test documentation shall be provided upon request.	Y
<b>72" CEILING GRAB RAIL, OVER SQUAD BENCH:</b>	
A polished stainless steel grab rail shall be installed in the ceiling over the squad bench. It shall be 72" long x 1 1/4" in diameter with welded stanchions every 24". It shall have fully radiused ends to eliminate a head injury hazard. The use of grab rails which do not have fully welded construction is unacceptable. The grab rail shall be bolted directly to the structure members of the ceiling frame-work.	Y
<b>72" CEILING GRAB RAIL OVER COT:</b>	
A polished stainless steel grab rail shall be installed in the ceiling over the cot. It shall be 72" long x 1 1/4" in diameter with welded stanchions every 24". It shall have fully radiused ends to eliminate a head injury hazard. The use of grab rails which do not have fully welded construction is unacceptable. The grab rail shall be bolted directly to the structure members of the ceiling frame work.	Y
<b>18" STAINLESS STEEL GRAB HANDLE SIDE DOOR:</b>	
One (1) 18" Polished stainless steel grab handle shall be installed at side entrance door. Each shall be fabricated from 1 1/4" diameter tube and have radiused ends, which match the overhead grab rail.	Y
<b>18" STAINLESS STEEL GRAB HANDLES REAR DOORS</b>	
One (1) 18" Polished stainless steel grab handle shall be installed at each rear entrance door. Each shall be fabricated from 1 1/4" diameter tube and have radiused ends, which match the overhead grab rail.	Y
<b>SIDE ENTRANCE DOOR GRAB RAIL, 45 DEGREE:</b>	
The side entrance door shall be equipped with a custom built 45 degree grab handle which extends from under the door window in the horizontal plane and then diagonally to the lower outside corner of the door. The grab rail shall be fabricated from polished stainless steel 1 1/4" diameter tube with fully welded construction. The grab handle shall be bolted directly to the structural members with the door with the use 1/4-20 threaded fasteners.	Y
<b>REAR ENTRANCE DOOR GRAB RAILS, 45 DEGREE:</b>	
The rear entrance doors shall be equipped with two custom built 45 degree grab handle which extends from under the door window in the horizontal plane and then diagonally to the lower outside corner of the door. The grab rails shall be fabricated from polished stainless steel 1 1/4" diameter tube with fully welded construction. The grab handles shall be bolted directly to the structural members with the door with the use 1/4-20 threaded fasteners.	Y

<b>SEAT BELTS</b>	
<b>SEAT BELTS, SQUAD BENCH:</b>	
Three (3) sets of lap seat belts shall be installed, for persons seated on the squad bench. All seat belts shall have enclosed, automatic locking retractors with push button releases. All seat belts and seat belt mounts shall be tested to F.M.V.S.S. 210 and Federal Specifications KKK-A-1822. Documentation shall be available upon request.	Y
<b>SEAT BELT, REAR FACING ATTENDANT SEAT:</b>	
One (1) lap seat belt shall be installed at the rear facing attendant seat. The seat belt shall have enclosed, automatic locking retractors with push button releases. The seat belt and seat belt mount shall be tested to F.M.V.S.S. 210 and Federal Specifications KKK-A-1822. Documentation shall be available upon request.	Y
<b>SEAT BELT, LEFT SIDE ATTENDANT SEAT:</b>	
One (1) Seat belt shall be installed at the left side attendant seat. The seat belt shall have enclosed, automatic locking retractors with push button releases. The seat belt and seat belt mount shall be tested to F.M.V.S.S. 210 and Federal Specifications KKK-A-1822. Documentation shall be available upon request.	Y
<b>SQUAD BENCH PATIENT RESTRAINTS:</b>	
Three (3) matching seat belts shall be installed on the face of the squad bench which can be used for securing a second patient. The belts shall be securely attached to the structure of the ambulance and be automatic adjusting.	Y
<b>COT MOUNTING:</b>	
<b>COT MOUNT, (175-4):</b>	
A Dual position Ferno Washington completely removable #175-4 cot mount shall be installed in the left side & center positions of the ambulance. The mount shall be aligned to hold a Ferno Washington cot and the mounting to the vehicle shall be certified to meet AMD standard 004 litter retention test. Test documentation shall be provided upon request.	Y
<b>MODEL OF COT:</b>	
Mounting hardware installed to secure a Ferno Washington #35A cot. Hardware Only - Cot not included	Y
<b>PERMANENT MOUNTED IV HOLDER</b>	
<b>RECESSED DUAL IV HOLDER, OVER COT:</b>	
One (1) Cast Products, or approved equal, "Recessed" dual IV holder shall be installed in the ceiling over cot. The holder shall be bolted to reinforcing plates located within the ceiling and include a Velcro strap for securing IV during transport.	Y

<b>RECESSED DUAL IV HOLDER, OVER SQUAD BENCH:</b>	
One (1) Cast Products, or approved equal, "Recessed" dual IV holder shall be installed in the ceiling over squad bench. The holder shall be bolted to reinforcing plates located within the ceiling and include a Velcro strap for securing IV during transport.	<b>Y</b>
<b>INTERIOR SURFACE FINISHES AND COLORS</b>	
<b>CEILING PANEL:</b>	
The ceiling panel of the ambulance shall be a reinforced fiberglass Elite panel laminated to a 1/4" sub-panel. The entire assembly shall be bolted directly to the ceiling structural framework. The panel shall be the fire retardant grade of Kemlite. All components (Including Lights, IV Holders and Grab Rails) mounted to the ceiling shall be mounted to the structural frame work of the ceiling. Under no circumstances shall anything be mounted to the ceiling panel only. The ceiling panel shall be attached to the vehicle framework without the use of visible hardware.	<b>Y</b>
<b>INTERIOR COLORS:</b>	
The interior color of the upper and lower laminated cabinets shall be Fashion Grey.	<b>Y</b>
<b>INTERIOR UPHOLSTERY AND PADDED SURFACES</b>	
<b>HEAD BUMPERS:</b>	
Vinyl padded head bumpers shall be installed in areas where head injury can occur. One (1) shall be located at the rear door, one (1) at the side door, and one (1) at the cab to body door. Full padding shall be provided around the cabinets on the left side attendant seat area. All head bumpers shall incorporate a 1" thick minimum padding under Heavy Duty matching upholstery.	<b>Y</b>
<b>HEAVY DUTY UPHOLSTERY, SEAMLESS:</b>	
All upholstery used in the vehicle shall be a High Quality Automotive Grade Vinyl Upholstery. All upholstery shall be seamless flat upholstery without the use of stitching on the outside corners. All material shall meet the requirements of FMVSS 302. Upholstery Color: Gray	<b>Y</b>
<b>HIGH BACK ATTENDANT SEAT:</b>	
An Automotive type, rear facing high back attendant seat shall be installed at the head of the primary patient. The seat shall have a 270 degree rotating capability with 4" of forward and aft adjustment. It shall be covered in gray upholstery to match the balance of the vinyl in the ambulance. The seat shall be bolted directly to the vehicle framework and be tested to withstand a pull of 5000 lbs. Documentation shall be provided upon request. The attendant seat shall not recline. The use of reclining seats is unacceptable. Seats Inc., Model 911 Seat	<b>Y</b>

<b>INTERIOR FLOORING FINISH</b>	
<b>LONPLATE II DIAMOND PLATE FLOORING:</b>	
A Commercial Quality LONSEAL Mfg Lonplate II, or approved equal, diamond plate floor covering shall be installed. It shall be glued down, utilizing heavy duty vinyl floor adhesive. The plywood floor shall be prepared with a wood filler prior to installation or flooring material to eliminate holes or bubbles in the flooring surface. Color shall be Gunpowder	Y
<b>ROLL-UP FLOORING 3":</b>	
The flooring on both the left side wall and right side squad bench shall incorporate a three inch roll-up section of the vinyl flooring material. The flooring material shall be finished with an anodized aluminum trim. The trim shall be secured in place with mechanical fasteners and have a tapered top surface to prevent accumulation of dirt and foreign material. The under side shall be designed in such a way to prevent infiltration behind the trim. This is required to eliminate the possibility of foreign liquid material from becoming trapped behind the flooring where it cannot be disinfected.	Y
<b>POLISHED STAINLESS STEEL FLOOR PLATES:</b>	
Full width polished stainless steel floor plates shall be provided for a Ferno-Washington #35A cot. The plates shall be held down with a double sided adhesive tape to eliminate the need for screws in the surface of the plate. The entire perimeter of the plates shall be flush with the floor and sealed with a silicone sealant.	Y
<b>DRIVERS CAB CONSOLE</b>	
<b>CAB CONSOLE, TYPE I WALK-THRU, LOWER:</b>	
An individually custom designed Radio and Siren Console shall be provided and mounted to the floor of the cab. It shall be equipped with a removable lid for access when servicing. The Console shall follow the contours of the floor to minimize its protrusion. The console shall be covered with a 1/4" padded black vinyl to match interior. All switches and controls shall be within easy reach of both the driver and passenger.	Y
<b>INTERIOR MOUNTED EQUIPMENT</b>	
<b>STAINLESS STEEL WALL PROTECTOR, LEFT SIDE:</b>	
A full length by 12" high polished stainless steel wall protection panel shall be installed along the left side cabinet wall above the rolled up floor. The panel shall be held in place without the use of visible screws or fasteners and shall have all edges completely deburred prior to installation.	Y
<b>STAINLESS STEEL WALL PROTECTOR, RIGHT SIDE:</b>	
A full length by 11 1/2" high polished stainless steel wall protection panel shall be installed along the right side squad bench base above the rolled up floor. The panel shall be held in place without the use of visible screws or fasteners and shall have all edges completely deburred prior to installation.	Y

<b>"FASTEN SEAT BELT" AND "NO SMOKING" SIGNS:</b>	
Two (2) Large face "No Smoking" signs and one (1) Fasten Seat Belt sign shall be installed in the patient compartment of the ambulance.	Y
<b>ENTRANCE DOOR REFLECTORS:</b>	
Per the requirements of Federal Specifications KKK-A-1822 three (3) 3" diameter red reflectors shall be mounted to the inside outer corner of each entrance door. Two (2) rear doors, (1) side entrance door.	Y
<b>OXYGEN AND ASPIRATION SYSTEMS</b>	
<b>OXYGEN SYSTEM:</b>	
The Oxygen delivery system shall consist of a permanent mount DOT approved Medical Oxygen Cylinder. The oxygen line from the cylinder to the distribution outlets shall be oxygen cleaned, high pressure electrically conductive, "Green" hose with swagged fittings. All fittings and hardware used shall be Medical Oxygen Quality and cleaned for oxygen use.	Y
All oxygen hose shall be encased in high temperature protective loom to avoid chafing and physical damage. Any and all fittings shall be completely accessible for service or inspection without the removal of any cabinets or wall panels.	Y
The entire system shall be installed, inspected, tested and labeled per the requirements of Federal Specifications KKK-A-1822.	Y
The oxygen storage cylinder shall be accessible through a sliding transparent door for manual on/off control of the main valve and to monitor tank pressure on the regulator gauge.	Y
<b>OXYGEN SYSTEM:</b>	
The oxygen, vacuum and air systems in the vehicle shall be compatible with OHIO equipment systems, unless otherwise specified.	Y
<b>DUAL OXYGEN OUTLET:</b>	
One (1) Air Liquide dual oxygen outlet shall be flush mounted within the Life Support Station panel. The distance from the primary patient to the Life Support Station shall not exceed 35" per the requirements of KKK-A-1822.	Y
<b>SINGLE OXYGEN OUTLET:</b>	
One (1) single Air Liquide oxygen outlet shall be provided on the right side of the ambulance above the forward squad bench. The outlet shall be built in flush and not protrude more than 1" beyond the wall.	Y
<b>CEILING MOUNTED OXYGEN OUTLET, REAR:</b>	
An Air Liquide oxygen outlet shall be installed in the rear ceiling raceway 9" off the rear doors, 36" off the rear head bumper. The outlet shall be near flush in the Ducted climate control center wire raceway and not protrude more than 1/2" below the ceiling panel.	Y

<b>OXYGEN SHUT OFF SOLENOID:</b>	
An electric powered oxygen shut off solenoid shall be installed and mounted on the output of the oxygen bottle regulator. It shall be controlled by a switch located at the rear Life Support Panel. The solenoid shall be approved for medical oxygen use and be equipped with a manual override valve (in the event the electric solenoid may fail to open the valve). An electrical rectifier shall be installed in the circuit to prevent voltage spikes from entering the electrical system.	Y
<b>ELECTRIC SUCTION/ASPIRATION SYSTEM:</b>	
The vehicle shall be equipped with a permanently installed Suction/Aspiration System. The system shall be equipped with a high volume Thomas electric suction pump certified for use in all states including NEW JERSEY, with a minimum 30 liter per minute flow rate. The pump shall be activated from a relay controlled circuit and switch, on the Life Support switch panel. The pump shall be mounted in an enclosed compartment using rubber isolators to minimize any noise and vibration when in use. The pump shall be connected to an onboard collection bottle permanently attached to the counter near the primary patient. The connecting hose shall be fiber reinforced medical hose and loomed to prevent chafing. The entire system shall be tested and meet the criteria of KKK-A-1822. Test Documentation shall be available upon request. As with the oxygen delivery system all fittings and lines shall be accessible for inspection and service without the removal of cabinets or walls.	Y
<b>SSCOR DISPOSABLE COLLECTION SYSTEM:</b>	
On Board suction shall be provided with a SSCOR disposable system. System shall include SSCOR wall mounted regulator and disposable Bemis collection bottle mounted in stainless steel bracket mounted on wall per customer location.	Y
<b>VACUUM OUTLET:</b>	
One (1) Air Liquide vacuum outlet shall be provided and flush mounted within the Life Support panel. It shall be compatible with the Ohio Diamond adapter system. Located on end of switch pod, for SSCOR Suction Unit.	Y
<b>OXYGEN MONITOR:</b>	
The vehicle shall be equipped with an oxygen bottle contents monitor. The monitor shall consist of a high quality, analog oxygen gauge with a two inch, 270 degree dial face. This gauge shall be connected to the main oxygen supply tank and be connected at the high pressure inlet of the oxygen regulator. The system shall also include a system of visual and audible indication of contents. The panel shall have a green indicator light to indicate when bottle contents are above 500 PSI. It shall include a red indicator light and an audible alarm to indicate bottle contents below 500 PSI. The red indicator light shall be able to momentarily silence the audible alarm after the condition is brought to the attention of the ambulance attendant. The system shall be designed in such a way, as to reset the audible alarm if the condition is not corrected the very next time the vehicles master switch is engaged. The green indicator	Y

when depressed shall function as a means to test the system, when depressed all lights and alarms will function momentarily. The system shall utilize an analog gauge which indicates bottle contents whenever the main oxygen cylinder valve is in the on position. The use of part time devices which have a digital or bar graph read out are unacceptable. The electrical circuit shall be powered by an independent circuit breaker. The installation of this system shall include a #1633-2 Large Tank Oxygen Regulator.	
<b>OXYGEN BOTTLE MOUNT, "H" TANK:</b>	
The oxygen bottle shall be mounted in an approved Ziamatic, or approved equal, oxygen bottle retention system for an "H" size bottle. The mounting bracket shall be securely bolted to two Uni-Strut tracks welded to the vehicle framework. The entire mounting system shall be tested to the requirements of AMD-003; oxygen tank retention system. Test Documentation shall be provided upon request. The use of mounting brackets other than Ziamatic brand is unacceptable.	Y
<b>OXYGEN LOADER/UNLOADER:</b>	
The vehicle shall be equipped with a ZICO Quick Release 3030, or approved equal to load and unload the main oxygen cylinder in and out of the vehicle. The device shall be located in the oxygen compartment of the vehicle and operate in the up and down mode by an electrical linear actuator device. The up/down control shall be located on the compartment door directly adjacent to the loading device. The control shall consist of a single toggle switch that controls the motor reversing relays. The linear actuator shall extend a pair of parallel arms which extend first outward, then downward. Attached to the arms shall be a Ziamatic, or approved equal, oxygen bottle holder for the size bottle required. The ultimate lifting capacity of the loading device shall be 205 pounds. The motor shall include limit switches to prevent over extending the arms to far if the ground is uneven. Location: Left front compartment "A".	Y
<b>OXYGEN CYLINDER WRENCH:</b>	
An oxygen cylinder wrench shall be permanently attached to the wall of the oxygen compartment with a 24" ball type swivel restraining chain covered with gray plastic loom. The wrench shall be held to the wall with Velcro strapping when not in use.	Y
<b>ELECTRICAL SYSTEMS</b>	
<b>ELECTRICAL 12 VOLT:</b>	
The entire 12 volt Electrical System shall comply with the recommended standards and practices per F.M.V.S.S., Federal Specifications KKK-A-1822D & SAE where applicable.	Y
Electrical system provided by ambulance Manufacturer shall have Lifetime Electrical Warranty.	Y
The entire 12 volt DC Electrical System shall incorporate SXL Thermoplastic High Temperature Copper wire. Each wire shall be color coded with function imprinted every four inches for immediate identification.	Y

All exposed wiring shall be covered with Packard Flec or equal, black with gray stripe, convoluted loom with minimum of 300 degree F. Temperature rating. Loom with a lower temperature rating is cause for rejection. Large Heyco type or rubber insulators shall be used where wires pass through sheet metal or structural members. All circuits shall be protected with circuit breakers suitable to the circuit demand. Any wire carrying a load to an appliance in the 12 volt Electrical System shall be 16 gauge wire minimum.	Y
Electrical System shall consist of five main wiring harnesses which terminate at the Electrical Distribution Panel. Distribution Panel shall be centrally located with connections resulting through 45 pin Packard Electric Connectors. Harnesses shall include one (1) for left body, one (1) for right body, one (1) for Life Support Station, one (1) for cab switch console and one (1) for chassis.	Y
All Electrical components shall be mounted using a "plug in" type assembly which affords speedy replacement of failed components. The entire unit shall be housed in a readily accessible maintenance cabinet built into front wall of the personnel compartment. Attached to inside of door shall be complete documentation of 12 volt Electrical System. The use of exterior compartment mounted electrical distribution panel is unacceptable.	Y
The main power distribution panel shall consist of a plug-in modular system which includes locations for 46 plug-in circuit breakers and 60 plug-in relays, as standard equipment. This type of system is utilized to have standard circuit configuration while remaining totally flexible for custom circuits when required. All circuits shall consist of plug-in relays and plug-in circuit breakers only. The use of diodes, rectifiers, heat sinks, or other than automotive type relays is unacceptable.	Y
<b>CIRCUIT BREAKERS:</b>	
All circuit breakers 30 amp or less, shall be plug in Manual Reset type. All circuits which require greater capacity shall utilize a Cooper Electric or equal 40 or 50 amp "MAXI-AMP" manual reset circuit breaker.	Y
<b>RELAYS:</b>	
Devices being switched with loads in excess of one (1) amp (12 watt) shall be accomplished through Potter & Brumfield or equal, 40 amp SPDT 12 volt automotive relay switching devices. All relays used in the panel shall be of the same type to insure complete compatibility and ease of re-placement. Relays shall be controlled through a ground signal from all switches, including door post switches. All relays shall be plugged into the modular panel assembly including the 70 amp power relays where required. All relay circuits utilizing the SPDT relays and SPST 70 amp relay shall include internal suppression to eliminate voltage spikes in the electrical system.	Y
<b>GROUNDING:</b>	
All Modular Bodies shall be grounded to the vehicle chassis via two (2) 000 GA braided copper grounding straps. An additional 000 GA braided ground strap is added from vehicle engine to chassis frame. Stranded copper conductors i.e. Battery cables, shall not be used.	Y



Each appliance (i.e. Lights, fans) shall be grounded to the body structure in close proximity to its location or by a ground harness as required. The ground shall be equivalent to its feed wire size and be minimized in length. Each ground attached directly to the vehicle structure shall use machine screws with star washers or ring terminals with serrated ring to insure a positive contact at all times.	Y
All Body harnesses shall be contained within the body. Harnesses shall not run on the under side exterior of the body. Under hood harness shall be protected within high temperature convoluted loom. All connections exposed to the elements or under hood shall be made within "waterproof" heat shrink connections. This type of connection shall also be used on all heavy duty battery cables. All battery cables, both positive and ground shall be machine crimped and fully soldered prior to addition of waterproof heat shrink tubing. Any exposed connections not in heat shrink and battery connections not soldered shall be rejected.	Y
PC board conventional relay system or computer controlled switching system is unacceptable due to failure potential, component replacement problems and lack of a Lifetime Electrical Warranty.	Y
All Electrical Systems shall include three (3) spare relays and three (3) spare circuit breakers mounted within the Electrical Distribution Panel.	Y
<b>12V - 110 VOLT CIRCUIT SCHEMATIC DOCUMENTATION:</b>	
All harnesses, relays, circuit breaker terminal junction points and circuits shall be drawn on individual 8 1/2 x 11 size drawings. Each individual circuit shall be on (1) drawing, for ease of troubleshooting. A single drawing overall schematic is unacceptable. All electrical systems shall be designed for each vehicle. Generic or similar drawings are cause for rejection of vehicle. All schematics shall include only what circuits are provided in the proposed vehicle.	Y
<b>ELECTRICAL ANALYSIS:</b>	
Proper balance of the electrical system output and vehicle draw is critical in the design of all emergency vehicles. Vehicle proposed shall be provided with a detailed electrical analysis generated by the manufacturer of the ambulance and specific to this proposed vehicle and specific electrical equipment requested. General statements will not be acceptable.	Y
<b>DOOR POST SWITCHES ENTRANCE AND COMPARTMENT DOORS:</b>	
Sealed door post switches shall be installed in all entrance and compartment doors. All switches shall be sealed from the elements to prevent moisture damage and to prolong service life. The switches shall be warranted for lifetime of vehicle. All door post switches shall activate the grounds of relays only. Under no circumstances shall the door post switch carry more than 140 milliamp of electrical current.	Y

<b>CAB AND CHASSIS ELECTRICAL MODIFICATIONS</b>	
<b>ALTERNATOR:</b>	
The Electrical System shall be charged with a Chassis builder installed OEM 270 Amp Leece Neville Alternator with internal voltage regulator. The charging system shall not be modified in any way to interfere with the warranty provided by the chassis manufacturer.	Y
<b>BATTERIES, CAB STEP:</b>	
Three (3) Heavy duty OEM supplied truck batteries with the required ratings as specified shall be installed in the cab step. Batteries: 1950CCA Total	Y
<b>MASTER BATTERY SWITCH:</b>	
A Commander, or approved equal, 300 Amp VStart waterproof master battery disconnect solenoid, shall be installed per the requirements of KKK-A-1822 to power all ambulance vehicle conversion and modular body functions. The solenoid shall be activated by a heavy duty Cole-Hersee, or approved equal, 175 amp lever type switch mounted on the side of the console. The switch shall activate the ground control of the solenoid.	Y
Automatic shut down 5 min with ignition off.	Y
Switch mounted on side of console.	Y
<b>FRONT AND REAR SWITCH PANEL EQUIPMENT AND SYSTEMS</b>	
<b>VOLTMETER:</b>	
A Transportation Safety Devices, or approved equal, 270 degree sweep analog type voltmeter shall be installed within easy view of driver. The voltmeter shall be circuit breaker protected. The use of digital voltmeters is unacceptable due to its difficulty to read at a glance. The voltmeter shall be tied to the battery side of the master disconnect switch to allow a constant reading on the voltmeter when the switch is off. The voltmeter shall be installed with an angled bezel for better viewing by driver.	Y
<b>AMMETER:</b>	
A Transportation Safety Devices, or approved equal, 300 Amp, 270 degree sweep ammeter shall be installed within easy view of the driver. The ammeter shall include a match 300 Amp shunt and be fused or circuit breaker protected. The use of a digital ammeter is an unacceptable substitute to analog because it does not provide easy identification on a relative scale. The ammeter shall be installed with an angled bezel for better viewing by the driver.	Y
<b>SWITCHES:</b>	
All switches shall be 12 volt two (2) or (3) position heavy duty Carling Contura X, or approved equal, Full size, Euro-Look Rocker switches, with a black matte finish. Small rocker switches or push style switches are not acceptable substitution. Each switch shall have an integral pilot light which shall activate in the "On" position, including the Horn/Siren switch. The only	Y

switches that shall not have a pilot light are momentary switches, where they are not available. No switch shall carry more than one (1) Amp of power, (12 watts).	
For ease of service and supporting a lifetime electrical warranty, all switches shall have a plug in connector on the bottom of the switch contacts.	Y
All switches shall be mounted in a custom designed one piece panel for each vehicle. The switch panel shall be backlit with High voltage electroluminescent, ("EL") high voltage lighting behind the individual switch legends. Each EL switch panel shall include its own high voltage inverter to power the EL strip. The switch panels shall be finished in a black matte finish. All custom legends shall be made of matte black Lexan inserts with translucent lettering to designate each function. When complete the surface of the panel shall have a look of a homogeneous surface with out the need for white legends which appear to be an add on feature. Due to the superior backlighting of the EL strips, no exception is allowed. All switch circuits shall be designed for the life of the vehicle.	Y
<b>BATTERY "ON" INDICATOR:</b>	
A Master battery "On" indicator shall be installed on the drivers console of vehicle. The indicator shall be a minimum of 1/2" in diameter and glow whenever the batteries are connected to the system.	Y
<b>DOOR OPEN INDICATOR LIGHT:</b>	
A Red flashing indicator light shall be installed in the drivers switch console to indicate that an entrance door is ajar. The light will activate whenever the master battery disconnect switch is activated and an entrance door is opened. The indicator shall be a minimum of 1/2" in diameter. The door open indicator shall be relay controlled and the door post switches shall activate the relay.	Y
<b>COMPARTMENT OPEN INDICATOR LIGHT:</b>	
A Red flashing indicator light shall be installed in the drivers switch console to indicate that a compartment door is ajar. The light will activate whenever the master battery disconnect switch is activated and a compartment door is opened. The indicator shall be a minimum of 1/2" in diameter. The compartment open indicators shall be relay controlled and the door post switches shall activate the relay.	Y
<b>AUDIBLE DOOR/COMPARTMENT OPEN ALARM:</b>	
A high decibel, electronic beeper alarm shall be installed and activate, when a module entrance door or compartment door is opened. The alarm shall sound only when the vehicle is placed in drive or reverse and be independent of the door open/compartment open warning lights in the console. The warning lights shall activate anytime an entrance or compartment door is opened.	Y

<b>PARKING BRAKE ALARM AND INDICATOR:</b>	
The vehicle shall be equipped with a Dual-Mode alarm that will sound when the vehicles shift lever is in Neutral and the Parking Brake is not applied. Secondly the alarm will sound when the vehicle gear selector is in reverse or a forward drive gear and the Parking Brake is applied. The alarm shall include an indicator light in the drivers console and an audible alarm that will sound when the condition exists when the vehicle is in the run mode only.	Y
<b>HELLA GOOSENECK LIGHT:</b>	
A "Hella" gooseneck light with 7" flexible shaft shall be permanently installed in the driver's console. The light shall have a swivel head and an on/off switch located at the light. A separate removable red filter lens shall be provided.	Y
<b>VANNER VOLT GUARD WITH ELECTRONIC CONTROL ENGINE:</b>	
A Vanner volt guard shall be installed and tied to automatically control the on-off function of the throttle as voltage is raised and lowered by changing load. The control module shall be located on the main distribution panel and be wired directly to the electronic control of the engine.	Y
<b>ELECTRONIC THROTTLE:</b>	
The Chassis shall be equipped with an electronic throttle switch which activates the high idle of the engine to the pre-set speed, approximately 1200-1700 RPM. The throttle will disengage when the service brake is applied or when the vehicle is placed into a drive gear.	Y
<b>BACK-UP ALARM WITH DISABLE SWITCH:</b>	
An audible backup alarm shall be installed under the rear step area of the vehicle. The backup alarm shall be activated any time the vehicle is shifted into reverse gear. A relay controlled momentary cancel switch shall be installed in the drivers console to disable the backup alarm when it may not be required. The circuitry shall be designed to allow the alarm to be reset automatically and function the very next time the vehicle is placed in reverse. On-Off type switch is not acceptable.	Y
<b>OPTRONICS HAND HELD SPOT LIGHT:</b>	
An Optronics Blue Eye, or approved equal, 400,000 CP Spotlight shall be provided, model number KB-4003. The light shall have a 400,000 CP sealed beam bulb with a momentary "On" switch located on the handle. The light shall be securely mounted in cab when not in use.	Y
<b>ROOF MOUNTED SPOT LIGHT:</b>	
A Federal VisiBeam II, or approved equal, 100 watt Spotlight shall be provided, Model number VB12S1-40. The light shall be surface mounted to cab roof with hand held remote in cab console.	Y
Surface mounted to cab roof towards passenger side with remote control in console. Model # VB12S1-40	Y

<b>LOAD MANAGER/ SEQUENCER:</b>	
A combination Load Manager/Sequencer shall be installed in the drivers console. The Load Manager shall automatically shed load to maintain balance between alternator output and draw, by turning predetermined functions to the off position. The Load Manager shall include an override emergency bypass switch in the main electrical panel. The Load Manager/Sequencer shall only shed load when the vehicle is in the neutral or parked position.	Y
The sequencer function turns the emergency lighting on, one at a time in predetermined order, and turns them off in reverse order.	Y
RESPONSE AND SCENE AMPS CANNOT EXCEED 250 AMPS	Y
<b>ADDITIONAL AIR HORN ACTIVATION SWITCH:</b>	
Vehicle to be provided with an additional air horn electric solenoid activated by a momentary switch located in the cab on the passenger side floor, inboard and on the driver side floor, outboard. Only electric operated systems are permitted, a Mechanical Air Valve is unacceptable.	Y
<b>ANTI-THEFT DEVICE:</b>	
The vehicle shall be equipped with electric door locks for all exterior compartment doors. The locks shall be activated with the electric locks on the cab doors and by switches in the body entrance doors. A weatherproof switch to control the cab and body door locks shall be located in a hidden location on the grill of the vehicle hood. The locks shall be activated thru a relay located in the electrical compartment.	Y
<b>EMERGENCY WARNING SYSTEMS</b>	
<b>SIREN WARNING SYSTEM</b>	
<b>LIGHTED HORN/SIREN SWITCH:</b>	
A switch shall be installed in the drivers console to select between OEM Horn ring function of the vehicle Horn or Horn ring activation of the Siren. The switch shall have a lighted indicator and control a SPST relay located within the electrical distribution cabinet. A relay-controlled circuit is required to eliminate any potential voltage drop problems due to high amperage draw of the OEM Horns.	Y
<b>ELECTRONIC SIREN:</b>	
A Federal Signal Model PA 300-MSB Electronic Siren, or approved equal shall be provided and installed flush in the drivers console. The siren shall include standard siren tones, public address, air horn, and radio rebroadcast. The siren shall be backlit for night operation and include a hard-wired microphone.	Y

<b>SIREN SPEAKER SYSTEM</b>	
<b>BUMPER MOUNTED SPEAKER SYSTEM:</b>	
The front bumper of the vehicle shall be equipped with two (2) Cast Products Model SAP 4307, or approved equal speaker assemblies. The speakers shall be installed into openings cut into the front bumper and not require the chrome bumper to be cut or modified. The speaker assemblies shall include two (2) high efficiency 100 watt speaker drivers.	Y
<b>FRONT LIGHTBAR WARNING EQUIPMENT</b>	
<b>FLUSH MOUNTED LIGHTBAR:</b>	
The front light bar shall be flush mounted across the upper body below the roof cove.	Y
<b>FRONT LIGHT BAR:</b>	
A Whelen Engineering Model #4500KKFS Advant-Edge Plus, or approved equal 86" long Light Bar shall be flush mounted on the front of the vehicle under the roof radius corner. The light bar shall include (2) rotator lights with reflector mirrors and (5) large LED lightheads. The light bar shall be power-ed by a heavy duty power relay, circuit breaker and switch mounted in the drivers console.	Y
Light bar to have a 3M #9592 Opticom & #500 Opti Wire Includes (5) LED Amber ICC Lights Lens Color: R-R-R-W-R-R-R	Y
<b>REAR LIGHTBAR WARNING EQUIPMENT</b>	
<b>REAR LIGHT BAR:</b>	
A Whelen Engineering Model #4500KKKRS Edge Plus, or approved equal 86" long Light Bar shall be flush mounted on the rear of the vehicle under the rear roof radius. The light bar shall include (2) rotator lights with reflector mirrors and (5) large direction LED lights. The light bar shall be powered by a heavy duty power relay, circuit breaker and switch mounted on the drivers console.	Y
The Light Bar shall include two (2) Halogen, 17 degree angled work lights in the light bar to act as rear flood lights. Includes (5) Red ICC Lights and (1) Red LED brake light located in the center.	Y
Lens Color: R-R-R-W- <b>R</b> -W-R-R-R	Y
<b>LED TRAFFIC ADVISOR</b>	
A Whelen Engineering TA870L, or approved equal, high intensity LED traffic advisor light shall be flush mounted below the ear light bar. The traffic advisor light shall be 86" in length to match the rear light bar and shall be controlled by a control head mounted in the front console. The control head shall have a four function switch to select from: left arrow, right arrow, split arrow or flash pattern. There shall be a visual LED status display on the control head. There shall be 8 programmable flash patterns available.	Y

<b>WARNING LIGHTS</b>	
<b>ALTERNATING ELECTRONIC FLASHER:</b>	
An Electronic Flasher shall be installed in the power distribution panel. The flasher shall provide alternating flash patterns for all the LED warning lights specified. The flasher shall be controlled by a single pole lighted switch in the drivers console. The circuit shall be powered by an independent auto reset circuit breaker, and the flasher itself shall be internally short circuit protected.	<b>Y</b>
<b>FLASHING WARNING LIGHTS,</b>	
<b>LEFT AND RIGHT SIDES:</b>	
The vehicle shall be equipped with Whelen 900 Series, or approved equal, Maxi-Size LED flashing warning lights. The vehicle shall include four (4) light assemblies two on the right side and two on the left side of the vehicle. The lights shall be placed to the outside corners of the body. The color of the lights shall be red. All lights shall include a metallized flange chrome housing, designed for this light fixture.	<b>Y</b>
<b>WHELEN FLASHING WARNING LIGHTS, REAR:</b>	
The vehicle shall be equipped with Whelen 900 Series, or approved equal, Maxi-Size LED warning lights. The light assemblies shall include a single, relampable, halogen lamp.	<b>Y</b>
The two (2) light assemblies shall be installed to project their beam through the rear door windows when the doors are opened.	<b>Y</b>
All lights shall include a metallized flange chrome housing, designed for this fixture.	<b>Y</b>
<b>LED EMERGENCY WARNING LIGHTS</b>	
<b>LED FLASHING WARNING LIGHTS, OVER REAR WHEEL:</b>	
The vehicle shall be equipped with Whelen 500 Series, or approved equal Mini-Size Super LED flashing warning lights.	<b>Y</b>
Two lights shall be provided, one over each rear wheel area.	<b>Y</b>
The lights shall incorporate an integrated metallized flange chrome housing. Cast aluminum or other flanges are unacceptable.	<b>Y</b>
Color: Red	<b>Y</b>
<b>CAB MOUNTED WARNING LIGHTS</b>	
<b>LED FLASHING WARNING LIGHTS, GRILL:</b>	
The vehicle shall be equipped with Whelen 500 Series, or approved equal, Mini-Size Super LED flashing warning lights. The light assemblies shall include a single, relampable, strobe lamp.	<b>Y</b>
The lights shall be placed in the grill of the vehicle spaced a minimum of 18" apart on center.	<b>Y</b>

<b>LED INTERSECTION LIGHTS:</b>	
Two (2) Whelen 500 Series, or approved equal, Mini-Size Super LED shall be provided one each side of the vehicle hood above the fender.	Y
Color: Red lens	Y
<b>FLASHING WARNING LIGHT EQUIPMENT</b>	
<b>LED ENTRANCE DOOR SAFETY LIGHT, (FULL TIME):</b>	Y
Each entrance door, (3 units total) shall be equipped with a Whelen 700 Series, or approved equal, LED red flashing lights. The lights will activate when the vehicle's master switch is on and the entrance doors are open. Each door shall operate each light independently. The lights shall be semi-recessed with chrome housings in the lower outside corner of the door. The operation of each light assembly shall be dedicated to each door circuit independently.	Y
<b>EXTERIOR VEHICLE LIGHTS AND EQUIPMENT</b>	
<b>LED VEHICLE TAIL LIGHTS:</b>	
The vehicle shall be equipped with two (2) Whelen 600 Series, or approved equal, LED red stop/tail lights. The lights shall be located on the lower outboard corners of each side of the rear of the vehicle. The body shall be designed in such a way to eliminate the lights from being exposed to the elements from the backside.	Y
<b>VEHICLE BACK-UP LIGHTS:</b>	
The vehicle shall be equipped with two Whelen 600 Series, or approved equal, rear back-up lights, one each side on the inboard side of the lower panel. The lights shall operate any time the vehicle is placed in reverse. The light shall include an integrated metallized chrome housing. The body shall be designed in such a way to eliminate the lights from being exposed to the elements from the backside.	Y
<b>AMBER DIRECTIONAL LIGHTS:</b>	Y
A pair of Whelen 900 Series, or approved equal, LED Amber Arrow Directional Signal lights shall be installed on the rear of the vehicle directly above the stop/tail and back-up lights. The lights shall include an integrated metallized chrome flange housing on each fixture.	Y
Lights to be mounted below red flashers, to show thru rear doors windows.	Y
<b>MARKER/CLEARANCE LIGHTS:</b>	
LED Style Marker and Clearance lights shall be installed on the front, rear and both sides of the body to meet all Federal lighting requirements FMVSS 108.	Y
<b>REFLECTORS:</b>	
Two (2) pair of Reflex Reflectors shall be installed on both sides of the vehicle. The reflectors shall have chrome housings and be mounted without the use of unsightly screws.	Y



<b>REAR EMERGENCY FLASHING LIGHTS, BRAKE LIGHTS:</b>	
The two (2) rear red flashing warning lights in the upper most portion of the body, shall be activated whenever the vehicles service brake is applied and the red flashing warning lights are on. These lights shall be activated through a transfer relay circuit and under no circumstances shall they be powered by the vehicles stop lamp switch only. The stop lamp switch shall power the coil of the transfer relay only.	Y
<b>EXTERIOR 12 VOLT FLOOD LIGHTS</b>	
<b>WHELEN SIDE FLOOD LIGHTS:</b>	
Four (4) Whelen, 900 Series, or approved equal, Halogen 8-32 degree opti-scene lights shall be installed two (2) each side of the vehicle. The flood lights shall include single replaceable Halogen bulbs, and built-in internal optics in each light lens.	Y
The flood lights shall include metallized chrome flange housings specifically designed for each light. Cast aluminum housings are unacceptable.	Y
<b>REAR FLOOD LIGHTS, BUILT INTO REAR LIGHT BAR:</b>	
Two (2) Whelen, or approved equal, Scene lights shall be provided within the rear light bar mounted above the rear doors of the ambulance.	Y
Scene lights shall be mounted within the light bar housing, outboard of center flashing light with a 17 degree angle for ground illumination.	Y
<b>RIGHT SIDE FLOOD LIGHT, CONTROL:</b>	
The right side flood lights of the vehicle shall be controlled by two modes. The first mode of operation shall operate the flood lights from the relay controlled circuit and lighted switch located in the drivers console. The second mode shall activate the flood lights when the right side entrance door is opened. All circuits shall be relay controlled. No load current shall pass through the door post switch.	Y
<b>LEFT SIDE FLOOD LIGHT, CONTROL:</b>	
The left side flood lights of the vehicle shall function by the relay controlled circuit activated by the left flood lighted switch in the drivers console.	Y
<b>REAR FLOOD LIGHTS:</b>	
The rear flood lights shall automatically activate when the rear door is opened or when the vehicle is placed in reverse. All flood light circuits shall be relay controlled.	Y
<b>REAR FLOOD LIGHT SWITCH:</b>	
The rear flood lights mounted on the rear of the vehicle shall be controlled "on-off" by a single pole lighted switch located in the drivers console. The rear flood light switch shall override both back-up function and the flood lights "on" with the door open function and shall not be affected by those circuits.	Y

<b>REAR FLOOD LIGHT CANCEL SWITCH:</b>	
A flood light cancel switch shall be installed directly inside the rear entrance door. The switch shall be mounted within the cabinet adjacent to the door. The switch shall be a single pole momentary switch. The circuit shall automatically turn off the flood lights with a single touch of the switch.	Y
The circuit shall automatically re-arm itself the next time the rear entrance doors are opened. The circuit shall be relay controlled. The use of a manual canceling door post switch is an unacceptable substitution.	Y
<b>FLOW-THRU VENTILATION:</b>	
A high volume power exhaust ventilation system shall be installed on the left rear side panel of the vehicle. It shall consist of a (3) speed blower motor. The blower shall be mounted to an anti vibration plate welded to the inside wall. Installations which produce excessive noise due to vibration shall be cause for rejection. A Cast Products polished aluminum cowl vent with internal, rubber back flow flap shall be installed on the exterior of the modular body. Dual closeable intake vents shall be placed in the interior rear corner cabinet. A return air intake shall be located on the front of the ambulance body. Single speed blowers or blowers with resistor type speed control are unacceptable.	Y
<b>AUXILIARY AIR CONDITIONING CONDENSER:</b>	
The vehicle shall be equipped with an auxiliary air conditioning condenser. The air conditioning condenser shall be added to enhance the heat rejection of the additional compressor added for the body. The condenser shall be fan cooled by a condenser mounted 12 volt cooling fan. The fan shall be relay controlled and only be activated when the rear air conditioner unit is activated.	Y
Mounted to the frame rail of the chassis, in the area of the right side entrance door step well.	Y
<b>AIR CONDITIONING COMPRESSOR:</b>	
A separate air conditioning compressor shall be installed for the rear body of the ambulance. It shall be independent from the OEM front compressor.	Y
<b>DUCTED HEATER AND AIR CONDITIONING SYSTEM:</b>	
The unit shall have a minimum capacity of 32,000 BTU Air Conditioner, and 40,000 BTU Heat combination unit with a high performance pressurizer type 450 CFM blower. The climate control unit shall be permanently attached to the double ductwork system running full length of the ceiling of the vehicle. Each duct shall be fully radiused with approximate dimensions of 5" wide and not protrude more than 2 3/4" from the ceiling. In addition each shall have four (4) equally spaced front to rear, fully adjustable 4-way adjustable louvers with shut off feature at each register. The duct work shall be covered with a fully padded vinyl covering and also incorporate the vehicles drop down wire raceway cover in the center. The heater/air conditioner unit shall be located in the front of the vehicle centered above the cab to body pass through. An air cleaner filter media shall be installed in the return air grille located in the underside of the cabinet.	Y

All heater hoses shall be provided as EPDM rubber, as per recommendation of chassis manufacturer. The use of lesser quality hose or silicone hose is an unacceptable substitution. The systems heater shall include an automatic heat shut off valve which only opens when the heater unit is "On" and when the vehicle is running. The heater shut off valve shall also include an emergency shut off switch located within the rear power distribution panel. All Air Conditioner hoses shall be heavy duty type and have machine crimped ends, worm type hose clamps are cause for rejection of bid.	Y
No exceptions or deviations to this system will be allowed due to its superior air distribution system and low noise characteristics. An exception will be cause for rejection of bid.	Y
Bidder/manufacturer must provide proof that this is an operating climate control system, offered as a standard component in their emergency vehicle production. Prototype systems are not acceptable. A user list of vehicles utilizing this system shall be provided with the bid.	Y
<b>ELECTRONIC DIGITAL DISPLAY THERMOSTAT CONTROL:</b>	
An electronic thermocouple type thermostat shall be used to monitor and control both air conditioning and heater units. The thermostat shall include a digital display, with 1/2" LED digits, which displays both ambient and set temperature. The fan speeds shall be automatically controlled depending on the temperature differential in the vehicle. The unit shall include an on-off control switch in the rear switch panel. The use of spring or bimetallic household thermostat is unacceptable. Only automotive type units shall be used. The thermostat unit temperature probe shall be located mid level in the patient compartment.	Y
<b>INTERIOR AND COMPARTMENT UTILITY LIGHTING</b>	
<b>DOME LIGHTING:</b>	
Six (6) Dual Intensity Weldon, or approved equal, dome lights shall be equally spaced down both sides of the ceiling. Each light shall include a dual intensity incandescent bulb. The lights shall be relay controlled and have a lighted double throw switch in the rear Life Support panel. All lights to be mounted to vehicle frame work, not to ceiling panel material.	Y
<b>DOME LIGHTS WITH DOOR OPEN:</b>	
The dome lights mounted in the ceiling of the vehicle shall be activated to the low intensity position when the personnel entrance doors are open. The circuit shall be relay controlled and the dome light current shall not be controlled by the door post switch.	Y
<b>EXTERIOR COMPARTMENT LIGHTING:</b>	
All exterior compartments shall be lighted by one or two (as required) 4" recessed light fixtures. The compartment lights shall be controlled by an automatic door post switch in each door. The lights shall be located near the top of the compartment for full compartment illumination. The compartment open indication light shall activate anytime any compartment door is opened. The door post switch shall activate the compartment lighting relays. The door post switch shall not carry the current of the compartment lights.	Y

<b>PANEL LIGHTS:</b>	
An indirect light located above the Life Support Station counter shall be used to illuminate the action area. The light shall be a Xantec 12" incandescent model and be switched by a switch in the rear switch panel. The rear panel light switch shall also activate the light in the oxygen storage compartment.	Y
<b>STEPWELL LIGHT:</b>	
An independent, recessed step well light shall be provided in the rear side of the diamond plate step well and be automatically activated whenever the side entrance door is opened. The light shall function as a courtesy light and activate regardless of the position of the module disconnect switch. The exterior shall be protected from weather and damage. All connections shall be weatherproof, sealed connectors.	Y
<b>12 VOLT FLUORESCENT LIGHTS:</b>	
Four (4) 24", 15 watt, twin bulb fluorescent fixtures shall be installed and equally spaced in between the (6) Halogen dome lights.	Y
The fixtures shall have reinforced housings with a plastic diffuser which locks in place. The lights shall be relay controlled and switched by a lighted single pole switch in the rear Life Support switch panel. Each light shall also incorporate an individual switch to allow lights to be turned off independently. All lights shall be mounted to the vehicle ceiling structural members and not to the ceiling panel material alone.	Y
<b>FLUORESCENT LIGHTS; 12 VOLT, 115 VOLT COMBINATION:</b>	
The 12 volt fluorescent lights mounted in the ceiling of the vehicle shall be powered by the vehicles 12 volt battery charger/conditioner when the vehicle shoreline is attached to an outside 115 volt power source. The lights shall be controlled by an additional transfer relay to prevent the lights from discharging the vehicle batteries when the shoreline is not plugged in. The fluorescent lights shall operate from a single pole lighted switch in the rear of the vehicle. The lighted indicator shall be wired in such a way to function only when power is provided and not directly from the vehicle battery.	Y
<b>FLUORESCENT LIGHT; "CHECK OUT" TIMER:</b>	
A 60 minute mechanical timer shall be provided to allow the fluorescent lights to be turned to the on position when the vehicle exterior power source is connected. The timer shall only function when the shoreline is plugged in and will not function when the battery switch is activated.	Y
Timer to be located on right side wall, mounted low at head of backrest compartment.	Y
<b>DUAL DOME LIGHT SWITCHES:</b>	
Per the requirements of KKK-A-1822, two independent dome light circuits with two independent switches shall be provided to control two banks of (3) dome lights each. The switches shall be marked in the Life Support panel as left dome light and right dome light. Each switch shall power the low mode of the fixtures independently.	Y

<b>12 VOLT UTILITY AND MEDICAL OUTLETS</b>	
<b>12 VOLT MEDICAL OUTLET:</b>	
One (1) 12 volt Power Point outlet shall be provided to charge 12 volt equipment. The outlet shall be circuit breaker protected and provide a source directly from the vehicle batteries, and bypass the vehicles master battery disconnect switch. The outlet shall be located at the Life Support Station.	Y
<b>12 VOLT MEDICAL OUTLET:</b>	
One (1) 12 volt Power Point outlet shall be provided to charge 12 volt equipment. The outlet shall be circuit breaker protected and provide a source directly from the vehicle batteries, and bypass the vehicles master battery disconnect switch. The outlet shall be located in the right front compartment.	Y
<b>12 VOLT MEDICAL OUTLET:</b>	
One (1) 12 volt Power Point outlet shall be provided to charge 12 volt equipment. The outlet shall be circuit breaker protected and provide a source directly from the vehicle batteries, and bypass the vehicles master battery disconnect switch.	Y
Qty: (4), Location: (1) Additional at Life Support Station, (1) Left rear, above shelf, (2) in cab installed on passenger side of cab console as high as possible.	Y
<b>ANTENNA AND COMMUNICATION RADIO EQUIPMENT</b>	
<b>ANTENNA:</b>	
A Coaxial Antenna lead shall be pre-wired from a location in the wire raceway to the location of the two-way communication radios.	Y
The antenna lead in the roof shall include a connector soldered to end of cable for install of two-way communication radio antenna.	Y
<b>ANTENNA LEADS:</b>	
Three (3) Coaxial cable antenna leads shall be installed, they shall run from the body roof to the following locations.	Y
Location: To run to oxygen compartment.	Y
<b>CELLULAR TELEPHONE ANTENNA LEAD:</b>	
An antenna lead for a cellular telephone shall be installed, it shall run from the body roof to cellular telephone location.	Y
Location: To run to Life Support Station and terminate with a Motorola threaded connector for Cellular phone.	Y
<b>ANTENNA END CONNECTORS:</b>	
Mini UHF End connectors shall be installed on the antenna leads as specified below; Qty: (1) on cell lead in LSS	Y
<b>RADIO POWER LEAD:</b>	
A 10 gauge constant power positive lead and 10 gauge ground shall be provided with 30 amp circuit protection located in the rear Life Support Panel.	Y

Incls: (1) Red 10 gauge marked radio 12 volt Hot, 30 amp, (1) Black 10 gauge marked radio ground, (1) Orange 12 gauge marked 12 volt switched, 20 amp.	Y
<b>RADIO POWER LEADS:</b>	
A 10 gauge constant power positive lead and 10 gauge ground shall be provided with 30 amp circuit protection.	Y
Incls: (1) 12 volt Hot wire w/fuse holder & 30 amp fuse, (1) 12 volt switched wire w/fuse holder and 30 amp fuse.	Y
<b>RADIO POWER LEADS:</b>	
An 8 gauge constant power positive lead and 8 gauge ground shall be provided with 40 amp circuit protection.	Y
Incls: (1) 12 volt Hot wire w/fuse holder & 40 amp fuse, (1) 12 volt switched wire w/fuse holder and 40 amp fuse.	Y
<b>12 VOLT ELECTRICAL EQUIPMENT</b>	
<b>REAR STEREO SPEAKERS:</b>	
Two (2) low profile, flush mounted, AM-FM Stereo Radio Speakers shall be installed in the ceiling in the forward portion of the vehicle. The speakers shall be spaced with other equipment provided, (1) each side. The speakers shall be connected to the stereo radio within the cab dashboard. A "Volume Control" rheostat shall be provided in the rear switch panel to allow speakers to operate independent of front speakers.	Y
<b>AIR RIDE LOWERING SWITCH:</b>	
The air suspension system shall be capable of lowering the height of the rear floor by the use of an electric dump solenoid. The solenoid shall be activated by a back lighted and labeled double momentary switch located inside the left rear door, and in the cab console. One touch of the switch down will lower the vehicle. One touch of the upper momentary contact shall raise the vehicle to normal ride height.	Y
An automatic safety feature will be incorporated to this vehicle which will allow the Air Ride System to return to ride position when the vehicle is placed in reverse or a drive gear, if it was previously lowered without raising manually.	Y
With Medium Duty, Factory Air Suspension.	Y
<b>AUTOMATIC SNOW CHAINS, PREWIRED ELECTRICAL CONTROL:</b>	
The vehicle shall be equipped with a set of On-Spot, or approved equal, 6 strand automatic snow chains controlled by a switch located in the drivers console. The switch shall incorporate a red protective flip cover to prevent inadvertent switch activation of snow chains. The switch shall automatically be placed in the off position when the flip cover is down.	Y
<b>115 VOLT AC ELECTRICAL:</b>	
The vehicle shall include a 115 volt AC Electrical system separate an distinct from the vehicles 12 volt electrical system.	Y

The entire system shall be designed and tested to meet the requirements of the NFPA National Electrical Code (NEC) where applicable and use the balance of the NEC for general practices and procedures associated with high voltage 115/230 volt AC Electrical wiring and devices.	Y
The vehicle shall also meet and be tested to all requirements of AMD standard 009. Test Documentation and verification shall be provided upon request.	Y
<b>115 VOLT ELECTRICAL SCHEMATICS:</b>	
A complete wiring schematic shall be provided which indicates the systems entire 115 volt Electrical System. The schematic shall be done in the same format as the 12 volt wiring schematics and be provided upon delivery of the vehicle.	Y
<b>115 VOLT WIRING:</b>	
All wiring shall be three (3) conductor 10 GA or 12 GA minimum stranded copper cable as required by the circuit requirements. All conductors shall have 105 degree Celsius rated insulation, tinned conductors and be rated at 600 volt. SO black jacketed type cable is unacceptable.	Y
All cable wiring shall be encased in high temperature protective loom where exposed. In any location where the wiring may be exposed to the exterior or underside of the body, it shall be encased in liquid-tite conduit and waterproof junction boxes.	
<b>SHORELINE:</b>	
A 20 Amp Shoreline Male Motor Base shall be installed on the left side of the body over compartment "B". The Shoreline shall be waterproof type with spring loaded gasketed cover. The Shoreline shall be wired to the junction circuit breaker box located within the power distribution panel compartment. The Shoreline shall be provided with a matching female connector and shipped with the vehicle.	Y
<b>SHORELINE POWER AMBER INDICATOR LIGHT:</b>	
A waterproof 1/4" diameter NEON Amber indicator light shall be provided to indicate live power at the shoreline input connector. The light shall have a 115 volt lamp and be located directly above the main shoreline inlet.	Y
<b>115 VOLT POWER DISTRIBUTION BOX:</b>	
A 115 volt power distribution box shall be installed in the vehicles main electrical cabinet. The distribution box shall consist of a NEMA approved waterproof junction box with a 20 amp magnetic type circuit breaker installed. The circuit breaker shall power two duplex receptacles also mounted within the distribution box. Vehicle Ground Fault protection shall be provided by a lighted 20 amp GFI outlet. All wiring and circuits provided shall be sized for a 20 amp capacity, 12 gauge conductor, minimum.	Y
<b>115 VOLT OUTLETS INTERIOR:</b>	
115 volt AC Duplex Electrical outlet shall be installed in the vehicle. The outlets shall be "Lighted" duplex type. The Neon light within the outlet shall glow when live power is at the outlet. All outlets within the vehicle shall be GFI protected. The location of the outlets shall be as follows, one (1) located on the back wall of the Life Support Station.	Y

<b>115 VOLT OUTLET INTERIOR:</b>	
115 volt AC Duplex Electrical outlet shall be installed in the vehicle. The outlets shall be "Lighted" hospital grade duplex type. The Neon light within the outlet shall glow when live power is at the outlet. All outlets within the vehicle shall be GFI protected. The location of the outlets shall be as follows, one (1) located on the left rear wall of the vehicle. Qty: (2), above shelf	Y
<b>115 VOLT OUTLET INTERIOR:</b>	
115 volt AC Duplex Electrical outlet shall be installed in the vehicle. The outlets shall be "Lighted" hospital grade duplex type. The Neon light within the outlet shall glow when live power is at the outlet. All outlets within the vehicle shall be GFI protected. The location of the outlets shall be as follows, one (1) located in the right front compartment.	Y
<b>115 VOLT OUTLETS INTERIOR:</b>	
115 volt AC Duplex Electrical outlet shall be installed in the vehicle. The outlets shall be "Lighted" duplex type. The Neon light within the outlet shall glow when live power is at the outlet. All outlets within the vehicle shall be GFI protected. Qty: (1) Additional located at Life Support Station for a total of (2).	Y
<b>BATTERY CHARGING EQUIPMENT</b>	
<b>BATTERY CONDITIONER/POWER SUPPLY:</b>	
The vehicle shall be equipped with a IOTA DLS-30, or equal, 30 Amp Battery Conditioner/Power Supply to charge the vehicle batteries when plugged into the external shoreline. The battery charger shall be a fully automatic controlled taper charger and provide no charge when the batteries are completely charged. The Conditioner shall be a heavy duty, continuous duty, solid state unit. The use of heavy inefficient transformer type units is unacceptable.	Y
<b>12 VOLT TO 115 VOLT INVERTER</b>	
<b>1000T WATT INVERTER:</b>	
A Vanner Model 20-1000TUL, or approved equal, 1000 watt Inverter shall be installed in the power distribution panel. The inverter shall have a built in transfer switch to power equipment from both the shoreline or vehicle power.	Y
The inverter shall have a remote control panel Vanner Model IFM1 module and control switch, located in the rear switch panel. All battery leads to inverter shall be powered by 2 GA SXL battery cable, minimum, directly from the vehicles master disconnect switch.	Y
NOTE: Any battery charger or engine block heater shall not be powered by the transfer circuit within the inverter. All connections for this equipment shall be made in a NEMA approved junction box before the transfer circuit, of the Inverter.	Y



<b>VEHICLE PAINTING</b>	
<b>PAINTING PROCESS:</b>	
The entire modular body shall be prepared and painted in strict accordance to Sikkens painting processes for aluminum. All Sikkens products shall be used throughout the preparation and painting stages, eliminating any incompatible products. Paint finish shall be provided with a Seven (7) year warranty supported by the manufacturer.	<b>Y</b>
<b>PAINT PROCEDURES FOR MAJOR COMPONENTS:</b>	
<b>I. Surface Preparation</b>	
A. All surfaces shall be washed thoroughly with OTO degreaser prior to any sanding, blasting and or body work to prevent the impingement of contamination into substrate.	<b>Y</b>
B. Surface shall be thoroughly abraded with DA 180-220 grit.	<b>Y</b>
C. All areas requiring body work shall be ground with 24 to 36 grit, and re-cleaned with OTO degreaser.	<b>Y</b>
D. Prime shall be applied within 24 hours of abrading.	<b>Y</b>
<b>II. Body Work</b>	
A. All body worked areas shall be filled with Evercoat Z-Grip body filler.	<b>Y</b>
B. All filled areas will be sanded with 80-120 grit dry paper.	<b>Y</b>
C. Evercoat Eurosoft Glaze putty to be applied over any body filler.	<b>Y</b>
D. Glaze putty to be sanded with 220 dry grit paper.	<b>Y</b>
<b>III. Application of Self-Etching primer</b>	
A. Equal parts CR Washprime & CR Wash hardener.	<b>Y</b>
B. One (1) medium "See through" coat of Self-Etching primer shall be applied at an air pressure of 50 to 60 PSI (HVLP) at the spray gun to achieve a total dry film build between 0.3 - .04 mils.	<b>Y</b>
C. 15 minutes minimum flash time.	<b>Y</b>
<b>IV. Application of Primer / Sealer</b>	
A. One (1) Wet coat of Autocoat LV Sealer shall be applied using 50-60 PSI (HVLP) at the spray gun to achieve a minimum dry film build of 2.5 mils.	<b>Y</b>
B. 10-15 minutes of flash time shall be allowed between coats.	<b>Y</b>
C. Primed Body shall be allowed to dry 20 minutes - 8 hours at 70 degrees F/50% RH prior to top coating.	<b>Y</b>
<b>V. Autocoat LV Polyurethane Top Coat Finish System (Base Coat)</b>	
A. Two (2) Wet coats of ACLV Base Coat color shall be applied to prepared body using 50-60 PSI at the HVLP gun to achieve film build of 1.2 - 1.4 mils.	<b>Y</b>

B. 5 - 10 Minutes flash-time shall be allowed between coats.	Y
<b>VI. Autoclear LV High Solids Acrylic Urethane Clear</b>	
A. Two (2) Wet coats of Autoclear LV shall be applied at an air pressure of 50-60 PSI (HVLP) to achieve a dry film build minimum of 1.2 - 1.4 mils.	Y
B. 5 - 10 Minutes flash time between coats.	Y
C. Force Dry (Bake)	Y
D. Bake for 45 minutes with a surface temperature of a minimum of 140 degrees F.	Y
<b>VII. Striping Autobase Clear coat System (Base)</b>	
A. Sand desired area with 400 dry grit paper.	Y
B. Clean surface with Autoclean degreaser.	Y
C. Mask off remainder of unit.	Y
D. 1-2 Medium coats of Autobase color shall be applied at a pressure of 50-60 PSI (HVLP) to achieve a dry film build of not more than .5 mils.	Y
E. 2-5 Minutes flash time between coats.	Y
F. Dry for a minimum of 20 minutes at 70 degrees F 50%RH before applying Autoclear LV.	Y
G. Two (2) Wet coats of Autoclear LV shall be applied at an air pressure of 50-60 PSI (HVLP) to achieve a dry film build minimum of 1.2 - 1.4 mils.	Y
H. 5-10 Minutes flash time between coats.	Y
I. Force Dry (Bake)	Y
J. Bake for 45 minutes with a surface temperature of a minimum of 140 degrees F.	Y
<b>VIII. Polish-out</b>	
A. Surface must dry for a minimum of 24 hours at 70 degrees F 50% RH.	Y
B. Wet sand with 1000 grit paper 1st.	Y
C. Wet sand with 1200 grit paper 2nd.	Y
D. Wet sand with 1500 grit paper 3rd.	Y
E. Polish with 3M rubbing compound and wool pad.	Y
F. Machine glaze with wool pad.	Y
<b>PAINT CORROSION PROTECTION:</b>	
All exterior fastener locations that penetrate the paint on the modular body are to be treated with Electrolysis Corrosion Kontrol (ECK). Every external fastener hole shall have ECK sprayed into the hole for full coverage. The perimeter of the hole shall be covered with a minimum of .5 diameter of ECK. This is to protect the head of the fastener from touching the	Y

<p>painted surface. All applications of ECK are to take place before component mounting. The fasteners that are included in this process are for the following components: Lights, Light Bars, Hinges, Diamond plate panels, Fuel fill, License plate holder, Shoreline, Vent Covers, Rain Gutters, Rub Rails, Fenderettes and Door Grabbers. Additional items that are mounted to the painted body will also be included. When an item is cut into the body causing an unpainted edge, that unpainted edge shall be completely coated with ECK prior to component mounting.</p>	
<b>PAINT COLOR:</b>	
Modular body shall be painted International White #FLNA4002 to match cab.	Y
<b>TRIPLE STAGE PAINT PROCESS AMBULANCE BODY:</b>	
Modular body shall be painted with a triple stage process that includes as part of the final stage, a wet sanding process with the final finish buffed to a high gloss.	Y
<b>PAINT STRIPE, CUSTOM TWO-TONE:</b>	
A custom two-tone paint stripe shall be applied to the sides and rear of the vehicle including the cab. The stripe shall be applied using the Autobase paint process.	Y
Upper White, No. NAV 9036	Y
Lower Color: Yellow, No. FLNA1153	Y
NOTE: Blue reflective "P-Wave" line to be paint break This requirement will be discussed during pre-construction conference.	Y
<b>VEHICLE GRAPHICS AND LETTERING</b>	
<b>REFLECTIVE LETTERING:</b>	
The vehicle shall be provided with custom reflective lettering prior to the delivery of the unit. The lettering shall be finalized at the pre-construction conference prior to construction.	Y
Color: Gold reflective with Black outline/shade 2 Sides: CHESTERFIELD FIRE & EMS	Y
<b>REFLECTIVE TAPE INSERT:</b>	
A 2" wide vinyl reflective tape insert shall be installed on the entire length of the painted stripe along the vehicle. Color: Blue	Y
Stripe to have rear "P-Wave" design, dividing yellow and white paint layout. Stripe to continue on cab.	Y
<b>REFLECTIVE STRIPE:</b>	
A 4" wide vinyl reflective tape stripe shall be installed on the sides and rear body of the vehicle. The stripe shall be custom cut around all doors and equipment. The stripe shall be free from air bubbles and defects.	Y
Color: Blue, Location: Lower rocker area, 6" up from rub rail.	Y

<b>KKK-A-1822 COMPLIANCE DECALS:</b>	
The ambulance shall be provided with the following decals which are required for compliance to KKK-A-1822 Federal Specifications:	Y
Three 6" "Ambulance", with block letters and reflective border, one each side and one on the rear of the body.	Y
One 4" mirrored "Ambulance", with block letters and reflective border, on the hood of the vehicle.	Y
Two 4" Star of Life decals on the hood, one each side.	Y
Two 12" Star of Life decals on the rear of the ambulance, one each side.	Y
Two 18" Star of Life decals on the sides of the vehicle body.	Y
One 32" Star of Life decal on the roof of the vehicle.	Y
Two "No Smoking" signs installed in the interior of the vehicle.	Y
<b>COMMUNICATION RADIO EQUIPMENT</b>	
No Radio Installation provided in this bid. All radios shall be installed locally.	Y
<b>RADIO CUT-OUTS:</b>	
The bidder shall provide custom fit cut-outs in appropriate locations (Console, Life Support Station, etc) with required mounting brackets for customers radio components. This shall not include any routing of wiring or technical installation of radio equipment. Said installation shall be provided by the customer after delivery. Qty: (2) Radio Models: Kenwood, (1) Front, (1) Rear Console Dimensions: 7"L x 2 1/4"H	Y
<b>CHASSIS EQUIPMENT</b>	
<b>RUBBER MUD FLAPS:</b>	
Rubber mud flaps shall be provided behind the rear wheels of the vehicle. They shall be Heavy Duty Truck type and bolted to the inner fender liners of the modular body, behind the rear tires.	Y
<b>FUEL TANK:</b>	
The OEM Fuel Tank shall be relocated to the rear of the vehicle between frame rails. A fuel fill shall be provided and installed on the street side of the body.	Y
<b>EQUIPMENT:</b>	
The following equipment shall be provided with the vehicle at delivery;	Y
A Floor mount dual bottle base, Cast Products Model #CP2051 shall be provided and installed in the recessed area at the head of the squad bench.	Y
A Ferno Washington wall mount dual bottle bracket Model #520 shall be provided to secure bottles.	Y

<b>Chassis International 4300LP (current year production) – Per Attached Specifications</b>		
International Engine Programming Parameters		Y
2003 Electronic Parameters Summary		Y
2003 4300 SBA LP 4x2 (MH025)		Y
Road Speed limiting	1 (on)	Y
Vehicle Speed Limit	74 MPH	Y
Max. Engine Speed (No VSSN)	2640	Y
Cruise Control	1 (on)	Y
Min. Cruise Control Speed	35 MPH	Y
Max. Cruise Control Speed	74 MPH	Y
Retarder - Service Brake Interface	OFF N/A	Y
PTO Control (on/off)	Remote & Cab	Y
In Cab PTO - Mode	2 (Variable)	Y
Max PTO Engine Speed	2300 RPM	Y
Set Engine Speed (Speed 1)	1000	Y
Resume Engine Speed (Speed 2)	1500	Y
Disable Cab Interface for PTO	On	Y
Remote Throttle for PTO Control	On	Y
Engine Response Rate for PTO	500	Y
Max. Road Speed for Mobile Control	20	Y
Engine – Prot - e	3(2-2 way warn)	Y
Two - Speed Axle	0(Off)	Y

## **PROPOSAL**

### **BASIS OF AWARD**

**Chesterfield County intends to award this contract to a single bidder. The County reserves the right to award bids for requirements contracts based on the pricing of the initial term of the contract or any combination of initial and renewable terms.**

<b>Item No.</b>	<b>Qty.</b>	<b>Description</b>	<b>Unit Price</b>	<b>Total Amount</b>
1.	1 per Agency	Current Model Production, Medium Duty Type I Ambulance, as per bid specifications and requirements.	\$	\$
Chassis Year/Make/Model:				
Body Make/Model				
<b>ADDITIONAL OPTIONS</b>				
1.		Supply Corian, or approved equal, counter tops in place of Formica	\$	
2.		Supply and install a Firecome 3020, or approved equal dual radio intercom system. The system shall be capable of allowing the attendant to transmit on the medical radio while allowing the driver to use the dispatch radio. The system shall include 2 over head headsets with radio transmit capability and flex boom, and 1 over head single side headset with radio transmit and flex boom. Radio interface for 2 radios, 4 interior headset modules, 1 exterior headset module, Y-adaptor and selector switches shall be included.	\$	
Manufacturer Model/PN:				
Warranty/Parts:				
Warranty/Labor:				
3.		Supply 2 recessed glove box holders in the patient compartment, location to be determined.	\$	
4.		Supply 2 Streamlight Survivor, or approved equal, hand lights and chargers.	\$	
Manufacturer Model/PN:				
Warranty/Parts:				
Warranty/Labor:				
5.		Supply 2 Streamlight SL40, or approved equal, hand lights and vehicle mounted chargers.	\$	
Manufacturer Model/PN:				
Warranty/Parts:				
Warranty/Labor:				

Bidders shall furnish pertinent information in relationship to warranty coverage, to include Warranty Parts/Labor, on all aspects of cab-chassis, body and equipment.

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Bidders shall indicate the nearest cab-chassis and body service center and/or mobile unit available for handling repairs/services, as per bid requirements:

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Bidders shall indicate the factory location where ambulance will be built, as per bid requirement:

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Bidders shall list delivery time on stock and non-stock parts:

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**RENEWAL OF CONTRACT FOR INITIAL TERM**

The County reserves the right at its sole option to renew this contract for additional terms. Pricing for the additional terms shall be within percentages indicated below:

Renewal – January 1, 2005 through December 31, 2005 Maximum Percentage Increase Above First Term's Prices	_____ %
Renewal – January 1, 2006 through December 31, 2006 Maximum Percentage Increase Above Second Term's Prices	_____ %
Renewal – January 1, 2007 through December 31, 2007 Maximum Percentage Increase Above Third Term's Prices	_____ %
Renewal – January 1, 2008 through December 31, 2008 Maximum Percentage Increase Above Fourth Term's Prices	_____ %
Renewal – January 1, 2009 through December 31, 2009 Maximum Percentage Increase Above Fifth Term's Prices	_____ %
Renewal – January 1, 2010 through December 31, 2010 Maximum Percentage Increase Above Sixth Term's Prices	_____ %
Renewal – January 1, 2011 through December 31, 2011 Maximum Percentage Increase Above Seventh Term's Prices	_____ %
Renewal – January 1, 2012 through December 31, 2012 Maximum Percentage Increase Above Eighth Term's Prices	_____ %
Renewal – January 1, 2013 through December 31, 2013 Maximum Percentage Increase Above Ninth Term's Prices	_____ %



**CONTRACTOR DATA SHEET**  
**TO BE COMPLETED AND SUBMITTED WITH BID**

**QUALIFICATIONS:** Firms shall have the capability and capacity in all respects to fulfill the contractual requirements to the satisfaction of the County.

Indicate the length of time you have been in business as a company providing the type of service required for this contract. **(NOTE: Bid requires a minimum of ten (10) Years.)**

\_\_\_\_\_years      \_\_\_\_\_months

Provide a minimum of three (3) references which may substantiate past work performance and experience in the type of work required for this contract.

Name, Address, Phone Number and Contact Person

1.
2.
3.

**TERMS AND SIGNATURE SHEET**

**All bids shall be signed on the Terms and Signature Sheet in order to be considered.**

If a discount is offered, it is required that a minimum of fifteen (15) days be allowed for payment in order for the discount to be considered a factor in the evaluation of this bid. Our terms are\_\_\_\_\_. If this blank is not filled in, it is understood that a discount of 2% is allowed for payment by the 20th day after receipt of invoice.

Please indicate length of time required, in calendar days, for delivery/completion/pickup after notification of award (oral or written), as this may be a factor in making award. \_\_\_\_\_

All prices shall be F.O.B.: Located Within Bid. Freight, delivery costs, and incidental charges shall be included in the bid price(s).

In compliance with this Invitation for Bid #03-3237-8867 and subject to all conditions thereof, the undersigned offers and agrees to furnish any or all items and/or services upon which prices are quoted, at the price quoted as specified.

My signature certifies that the accompanying bid is not the result of or affected by, any act of collusion with another person or company engaged in the same line of business or commerce, or any act of fraud punishable under Chapter 12, Title 18.2, 498.4 of the *Code of Virginia*, 1950, as amended. Furthermore, I understand that fraudulent and collusive bidding is a crime under the Virginia Governmental Frauds Act, the Virginia Government Bid Rigging Act, and Virginia Antitrust Act, and Federal Law and can result in fines, prison sentences, and civil damage awards. I hereby certify that I am authorized to sign this bid for the bidder.

**Complete Legal Name of Firm:** \_\_\_\_\_

**Order From Address:** \_\_\_\_\_  
\_\_\_\_\_

**Remit To Address:** \_\_\_\_\_  
\_\_\_\_\_

**Signature:** \_\_\_\_\_

**Name (type/print):** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Fed ID No.:** \_\_\_\_\_ **Phone (\_\_\_\_)** \_\_\_\_\_ **Fax (\_\_\_\_)** \_\_\_\_\_

**We hereby provide the following information to Chesterfield County regarding our business. We understand that it is provided for statistical purposes only and all firms submitting bids will receive equal consideration.**

<b>Minority Business Enterprise:</b>	<b>Yes</b> _____	<b>No</b> _____
<b>Woman-Owned Business:</b>	<b>Yes</b> _____	<b>No</b> _____
<b>Chesterfield Business:</b>	<b>Yes</b> _____	<b>No</b> _____